

Stadium for Bicycle Racing ectric Railway Station

Motor Car Entrance

Administration Building

Press Centre

OF THE III<sup>rd</sup> EXHIBITION OF CZECHOSLOVAK ENGINEERING

BRNO - SEPTEMBER 1th - 22nd 1957



## CHAMBER OF COMMERCE OF CZECHOSLOVAKIA PRAHA

### **CATALOGUE**

of The IIIrd Exhibition of Czechoslovak Engineering

Brno — September 1th — 22nd 1957

Publishers of Technical Literature PRAHA



#### Ladies and Gentlemen

On behalf of the Czechoslovak Chamber of Commerce, the organizer of the exhibition, and on that of the exhibitors as well as the management of the Third Exhibition of Czechoslovak Engineering in Brno. I have the pleasure of welcoming all visitors from home and abroad. I hope that all those who have come to see the exhibition, whether for commercial or technical reasons, will be convinced that the Czechoslovak technology is continuously undergoing progressive development, this being the intention of the individual exhibitors and the organizers.

Our exhibition which, is already the third of its type and one of the greatest national industrial exhibitions in the world, testifies to the fact that the Brno engineering exhibitions have become in a comparatively short time an organic part of the tradition of our industry and exhibitions as one of their most important elements Already for the third time you are entering the Brno exhibition grounds where an imposing array of standard types of engineering products together with world novelties of the Czechoslovak engineering industry will acquaint you with our successes in the field of technology.

The importance of engineering exhibitions as contributions to the development of new, progressive technology and methods of produciton is, however, inseparably connected also with their importance for our foreign trade. An effective survey of the export programme of the Czechoslovak foreign trade corporations which are concerned with the export of engineering products and attain considerable success in world competitions will contribute to an increase of the number of orders

You can obtain a general idea about the Czechoslovak engineering industry by subscribing regularly to the following magazines:

#### CZECHOSLOVAK MOTOR REVIEW

which contains articles dealing with the technical advantages of motor vehicles of Czechoslovak make as well as instructions for their maintenance and servicing. It contains further novelties and interesting news from the production of motor-cycles and motor cars as well as reports about the successes of Czechoslovak machines in international races and competitions, all accompanied by rich illustrations.

ISSUE: 12 copies annually in English, French, German and Spanish versions.

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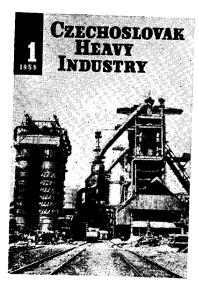


We recommend you to send your subscription to these magazines to the CZECHOSLOVAK CHAMBER OF COMMERCE,

Dept. of Technical Magazines,

ULICE 28. ŘÍJNA 13, PRAHA 1 - CZECHOSLOVAKIA.

You can obtain a general idea about the Czechoslovak engineering industry by subscribing regularly to the following magazines:



#### CZECHOSLOVAK HEAVY INDUSTRY

which deals with the technical development and progress of the Czechoslovak engineering industry and contains highly technical articles by the foremost experts of the Czechoslovak heavy industry as well as numerous illustrations.

ISSUE: 12 copies annually in English, German, French, Russian and Spanish versions.

SUBSCRIPTION RATE: \$ 6 yearly (or in other foreign currencies).

#### KOVOEXPORT

which affords information about the technical development of metal products, viz. those of the radio engineering industry, telecommunication techniques, optical, medical and surgical instruments, graphical and textile machines, precision tools, etc.

ISSUE: 12 copies annually in an English version with a Spanish summary, and in a German version with Russian and French summaries.

SUBSCRIPTION RATE: \$ 4 yearly (or in other foreign currencies).



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from commercial and technical partners both from countries with a highly developed industry and from those which are only building up their industrial power.

The slogan of this year's engineering exhibition, which stresses automation and mechanization as important means of increasing productivity of work and consequently means of improving the standard of living, is directed above all to all workers of the Czechoslovak engineering industry who will visit the exhibition and vhose comparison of the results of their own work with those of the work of workers of other factories will stimulate the effort to ensure continuous improvement of the good reputation of the Czechoslovak industry in the world.

The Third Exhibition of Czechoslovak Engineering is, in comparison with the preceding exhibition, of much greater importance. It is the last independent exhibition, of the strongest branch of the Czechoslovak industry before the renewal of the Czechoslovak fairs which will be organized from next year onwards in the very place you are visiting at present. We hope firmly that we shall have the pleasure of welcoming all visitors to the engineering exhibitions again at the renewed fairs and demonstrating to them to what extent the grandiose conception of the surveys of the Czechoslovak engineering industry was a mere preparation and overture to the renewed Czechoslovak fairs.

#### JAROSLAV PÍSAŘÍK,

DIRECTOR OF THE IIIrd EXHIBITION OF CZECHOSLOVAK ENGINEERING, BRNO

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## 01 STRONG CURRENT ELECTRICAL ENGINEERING

#### 01/001

#### Hydrogen Cooled Synchronous Compensator of DK 6176/2 Series

supplies or takes wattless current from the net; if over-excited, it operates as a condenser while it functions as a choke-coil in the under-excited state. Output: 30 MVAR, 10.5 kV, 3000 r. p. m. TECHNOEXPORT

#### 01/002

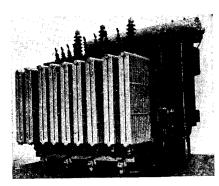
#### Air-Cooled Synchronous Turbo-Alternator of 6H5262/2 Series

intended for the production of electric power if directly connected to the steam turbine. Output: 5000 kVA, 4000 kW, 6300 V, 460 A, 3000 r. p. m. Exciter: 45 kW, 110 V, 409 A, 3000 r. p. m. TECHNOEXPORT

#### 01/003

#### Three-Phase Low-Voltage Alternator

two-bearing, flange, semi-enclosed type: A8c4, 400/231 V, 20 kVA, 16 kW, A10b4, 400/231 V, 62 kVA, 49.6 kW, A16a6, 400/231 V, 500 kVA, 400 kW. STROJEXPORT



01/005

#### 01/005 On-Load Transformer 1 ER 31 M

designed for transforming electric power of a 100 kV distribution system in order to supply a 22 kV net. Output: 25 MVA. STROJEXPORT

#### 01/006

#### Power Transformer 68,000 kVA,

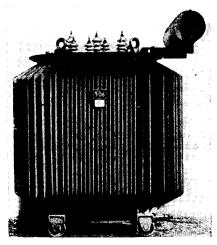
115  $\pm$  5 p. c./15 kV. The largest power transformer produced in Czechoslovakia. The oil cooling system consist of two radiator batteries which are located outside the transformer and in which the oil circulates.

TECHNOEXPORT

## **01/007**Test Transformer Set, 350 to 1050 kV

consists of transformer units with a 3/350 kV ratio. The exhibited test transformer is the third unit of the set, designed for a test voltage of zero to 1050 kV. Output: 333 kVA. Output of the complete set: 1000 kVA.

**TECHNOEXPORT** 



01/008

## **C1/008**Three-Phase Short-Circuit-Proof Transformer

The transformer winding is centrally arranged on the yoke, consisting of coils which are circular in shape. Output: 630 kVA, h. voltage 22,000 V, 1. voltage 6300 V.

TECHNOEXPORT

#### 01/011

#### Current Transformer 2 JO 220

150/300/600/1/1 A; the transformer has two cores, one for an output of 30 VA with an accuracy of 0.2 and overcurrent figure below 5, and the other one for an output of 60 VA within class of accuracy 1 and with overcurrent figure above 10. Weight: 1840 kg.

STROJEXPORT

### 01/012

#### Voltage Transformer COF 220

220000/V3/100/V3/100/3V, output 120 VA, class of accuracy 0,2 or 300 VA, class of accuracy 0,5, or 600 VA, class of accuracy 1. STROJEXPORT

#### 01/013-014

#### Current and Voltage Transformer

designed for measuring rated current of very high voltages of 110 kV, 132 kV, 161 kV and 220 kV in a 100 kV switchyard.

STROJEXPORT

#### 01/016 Single-Phase Autotransformers

#### 01/018

Air-Blast Circuit Breaker VV 110/d

for very high voltage switchyards. 110 kV, 1000 A, 3500 MVA, air pressure of 20 atm. Control voltage: 110/220 V d.c. STROJEXPORT

#### 01/019

#### Air-Blast Circuit Breaker VV 66/d

for very high voltage switchyards. 66 kV, 600 A, 2000 MVA, air pressure of 20 atm. Control volage: 110/220 V d. c. STROJEXPORT

#### 01/020

### Disconnecting Switch DOS B-110 Z/1000

for very high voltages with switchyard earthing switch. 110 kV, 1000 A, working air presure: 4,5 to 20 atm. Weigth: 100 kg. STROJEXPORT

#### 01/021

#### Disconnecting Switch DOS B-66Z

with earthing switch, for very high voltage switchyards. 66 kV, 600 A, working pressure of 4,5 to 20 atm. Weight: 100 kg. STROJEXPORT

#### 01/022

#### Minimum Oil Circuit Breakers for very high voltages

66 kV, 600 A, 1500 MVA 132 kV, 600 A, 3000 MVA 110 kV, 600 A, 2500 MVA.

STROJEXPORT

#### 01/023 01/024

## Autovalve Lightning Arresters 220, 132, 110 and 66 kV

Autovalve Lighting Arresters for high and low voltage, are designed to protect reliably the insulation of electric apparatus from the effects surges.

STROJEXPORT

#### 01/027

## Unit Head Switchboard 10 to 22 kV, 200 to 400 MVA

for medium sized industrial transformer stations with air blast and minimum oil circuit breakers with hand or airpressure drive. Voltage: 10 and 22 kV. Output: 20 to 400 MVA.

STROJEXPORT

#### 01/028

Six-Anode Air-Cooled Mercury Rectifier 6 UI 303, 1000 A, 3300 V

air-cooled, with six single-anode valves, arranged in a circle.

STROJEXPORT

#### 01/033

#### Rotary Single-Phase Rectifier for very high voltage 55 kV, 0.2 A

used for converting alternating current into direct current of very high voltage and very low intensity for the purpose of energizing electrostatic precipitators installed for the purification of flue and chemical gases. STROJEXPORT

#### 01/034 Contact Test Rectifier

used in electrolysis. It is provided with six choke colls, connected in series to six contacts which are operated from a synchronous motor by means of eccenters, rockers and cams. Trapezoidal and direct current premagnetization, parallel circuit with semi-conductors, measuring circuit for ascertaining the moment of switching off and on by means of measuring instruments and osciloscope.

STROJEXPORT

#### 01/035 Cable Filled with Oil under Pressure, 110 kV with terminals

The three cable cores are enclosed in a steel pipe filled with insulating oil under a pressure of 14 atm. which replaces the customary lead armour. The cable, 3 150 sq mm. in crossection is made of copper and designed for 60 MVA and 110 kV. STROJEXPORT

#### 01/037 D. C. Shunt Motor 2 ARU 3044 F/4

for use in rolling mills, for driving groups of conveyors, setting rollers, operating guide bars, etc. Output: 37,5 kW, 440 V, 600 r.p.m. Weight: 1230 kg. STROJEXPORT

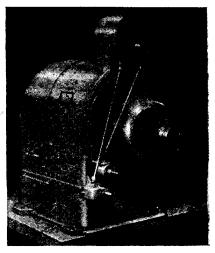
#### 01/038 Three-Phase Squirrel Cage Induction Motor RPU 9-36 R/20

designed for driving roller conveyors in rolling mills. Output: 10 kgm, 500 V, 9 A, 50 c/s, 270 r. p. m. Weight: 280 kg. STROJEXPORT

#### 01/039 Three-Phase Induction Motor ER 16-51 V/8

with own surface cooling and whirl type motor for use in dusty conditions, for driving hammer or ball mills, coal pulverizing mills and crushers, etc. Output: 260 kW, 6000 V, 34 A, 50 c/s, 740 r. p. m. Weight: 3940 kg.

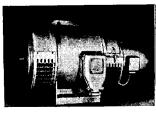
TECHNOEXPORT

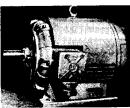


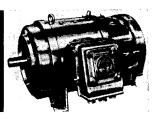
01/040

#### 01/040 Three-Phase Commutator Shunt Motor

with cooling air supply and outlet and automatic speed governor, for use with spinning, warping, winding, printing and knitting machines, cotton looms, etc. 380 V, 12,5 - 3,6 kW, 1400 - 440 r. p. m. STROJEXPORT



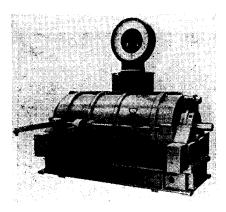




#### 01/042 Rotor of a Large Induction Aluminium Squirrel Cage Motor

for induction motrs with heavy and frequent starting, such as for the operation of coal hammer an ball mills and pulverizers. Output: 260 kW, 35 A, 730 r.p.m. Weight: 1120 kg.

STROJEXPORT



01/043

#### 01/043 Three-Phase Commutator Shunt Dynamometer

for direct measuring the torque of driving and driven machines. Output: 160~kW at 2800~r.~p.~m.

STROJEXPORT

# O1/O44 Three-Phase Air Contactor ST 4/60 for high voltages and a. c. up to 60 kV, 200 A

for switch rooms and industrial drives for switching loaded circuits up to 6 kV of rated voltage. Rated voltage: 6 kW. Maximum working voltage: 6,9 kW. STROJEXPORT

#### 01/047 Cubicle Low Voltage Switchboard

for d. c. voltages up to 440 V or a. c. voltages up to 500 V and currents up to 1000 A. STROJEXPORT

#### 01/048 System "U" Aluminium Switchboard

of standard aluminium boxes with equipment for rated voltages up to 500 V and rated bus-bar current of 600 A.

STROJEXPORT

#### 01/049 Spencer's Diaphragms

Thermal protection up to 110 °C, 220 V. STROJEXPORT

#### 01/050 Cubicle Switchboard SSN 600

for normal conditions (protection C) or designed to operate in coarse dust (protection F). Rated bus-bar current up to 600 A.

STROJEXPORT

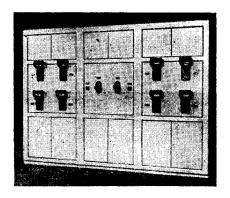
#### 01/051 Wall-Mounted Unit Head Distributor GSN

designed to operate under normal or dusty conditions (protection G). The bus-bars are for rated currents of 200, 400 or 600 A. STROJEXPORT

#### 01/052 Cubicle Switchboard SSN 2000 up to 2000 A

designed to operate under normal conditions (protection C). STROJEXPORT

01/047



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## COMPREHENSIVE EXPORT PROGRAMME

of products of the Czechoslovak Engineering Industry



SOLE EXPORTER



PRAHA CZECHOSLOVAKIA

#### 01/053 1 Mobile Transformer Station, Type "Julie"

is a mobile unit which can be promptly set in operation where electric power supply is required. Tree-phase main transformer. Output 3150 kVA. higher voltage 35 or 22 kV. Overhead transmission line. Lower voltage 6300 and 3150 V. Outgoing feeders by cable. STROJEXPORT

#### 01/053 2 Mobile Transformer Station, Type "Barbora" for Mines

for use underground and mines without explosion danger. Each of the three parts can be conveyed in normal cages. Output: 75 or 160 kVA. Voltage: 3 to 6 kV, 400 to 500 V. Auxiliary voltage: 24 V. STROJEXPORT

#### 01/054 Crane Dust-Proof Switchboards Type JS 10203, JR 10203

designed for the typified series of overhead travelling cranes of 5 to 50/8~T. The switchboards can be mounted in the cabin of the crane.

STROJEXPORT

#### 01/055 Load Carrying Electromagnet TM 5

designed to carry hot castings in metallurgical works. Input: 450 W. d. c. voltage: 300 V, 1,5 A. Weight: 330 kg. Maximum capacity: 3000 kg.

#### Bus-Bar Distribution System 200 A, 400 A, 600 A, voltages up to 500 V

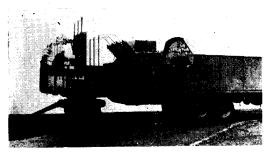
for the three-phase distribution of electric energy in bays of plants under normal conditions. STROJEXPORT

#### 01/059 H. F. Melting Furnace

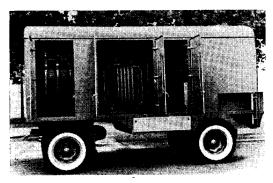
STROJEXPORT

### **01/060** Insulation Tester, Type M 029, 220 V, 50 c/s

By means of this surge impulse insu-



01/053 1



01/053 2

lation tester, faults in insulation (inter-turn short-circuit, short-circuit on the frame in the stator winding) can be ascertained. It is especially suitable for standard type electric motors. Input: 450 VA. D. C. voltage of impulse generator: 2,5 kW. STROJEXPORT

#### 01/061

Gross-Section through the
HV 84580/32 Generator of the
"Orlik" Hydro-Electric Power
Plant

TECHNOEXPORT

#### 01/063

#### 01/064

#### D. C. Generator MR 2814-4

Db type, HO design, 36 kW, 115 V, 313 A, compound type, 1500 r. p. m., castiron construction with two bearing shields.

STROJEXPORT



#### 01/070 Control and Signalling Desk

with technological lay-out, designed for coal crushing and pulverizing plants. Control voltage: 220 V. Signalling voltage: 34 V. Weight: 190 kg.

TECHNOEXPORT

#### 01/074 Cubicle Switch Plant, 6 kV

with two systems of bas-burs with draw-out air blast circuit breakers of 200 MVA.

STROJEXPORT

#### 01/075 H. V. Current Transformers

Short-circuit proof current transformer NAFD 421/340. Short-circuit proof current transformer, bushing type, NAFD 642/660. Short-circuit proof current transformer, bushing type, NAFD 863/850.

STROJEXPORT

#### 01/076 High Voltage Transformers, NV Type

Dry, two-pole insulated transformer NV 101, NV 184, NV 334, NV 444. STROJEXPORT

#### 01/077 Fuses

with fuse base outdoor mounting FTXS 10-200/11 (with FTXA 10-20/11 cartridge) FTXS 22-200/11 (FTXA 22-15/11) FTXS 35-200/11 (FTXA 35-10/11). STROJEXPORT

#### 01/078 Fuses to 60 A

with fuse base for outdoor mounting FTXT 10-200/11 (with FTXB 10-60/11 cartridge) FTXT 22-200/11 (with FTXB 22-40/11 cartrige) FTXT 35-200/11 (with FTXB 35-30/11 cartrige). STROJEXPORT

#### 01/079 Three-Pole Cut-Out Fuses to 60 A

FTTT 10-300/31 three-pole cut-out switch with three FTCB 10-60/11 cartridges, FTTT 22-200/31 with three FTCB 22-40/11 cartridges, FTTT 35-200/31 with three FTCB 35-30/11 cartridges.

STROJEXPORT

#### 01/080 Electromagnetic Contactors to 500 V

Four-pole air contactor HS 25-41. Three-pole air contractor with in-built thermal relay HBST 60-31, HBS 100-31, HBS 600-31, HBS 600-31. STROJEXPORT

#### 01/081 Air Blast Circuit Breakers, 10 and 35 kV

Three-pole air blast circuit breaker, resistance type, CPR 201-10/600. Three-pole air blast circuit breaker CP 605-10/2000. Three-pole air blast circuit breaker for repeat switching, CP 405-35/600.

#### 01/082

Control Valve for QC 20-1 Air Blast Circuit Breakers

STROJEXPORT

#### 01/083

Disconnecting Switches, 22 and 35 kV

Single-pole disconnecting switch for outdoor mounting TEPD 22/600-11 with air-pressure drive. Single-pole special disconnecting switch for outdoor mounting TEPK 35/600-11.

STROJEXPORT

#### 01/084

Isobreaker 10 kV, 400 A with 3 FTCS 10 fuses incl. cartridges

Three-pole type BTB 10/400-34 with three FTCS 10-200/11 fuses and FTCA 10-20/11 cartridges. STROJEXPORT

#### 01/085

Bulk Oil Circuit Breaker 35 kV, 400 A, 400 MVA

Three-pole oil circuit breaker OVH 35/532. STROJEXPORT

#### 01/086

Oil Circuit Breaker, Type VOP 10/600-33

Three-pole oil circuit breaker VOP 10/600-33. STROJEXPORT

#### 01/087

Air Circuit Breakers 100, 350, 600 A to 500 V

Three-pole air circuit breakers VMT 333, VMT 533, VMT 600-33.

STROJEXPORT

#### 01/088

#### A. C. Contactor Thermal Relays for use under unfavourable climatic conditions

Three-pole thermal relays ET 60-31, ET 100-31. Three-pole short-circuit proof thermal relays ETZ 200-31, ETZ 400-31, ETZ 600-31. STROJEXPORT

#### 01/089

Three-Pole A. C. Air Contactor, 1000 A STROJEXPORT

#### 01/090

Trip VMT for Air Blast Circuit Breakers STROJEXPORT

#### 01/091

Three-Pole Air Blast Circuit Breaker VMKN 3000-33

STROJEXPORT

#### 01/092

Four-Pole Circuit Breaker
LMTC 433 STROJEXPORT

#### 01/093

Automatic Dehydrator AOV 25

for use with compressor stations in switch plants and power stations.

STROJEXPORT

#### 01/094

Outdoor Fuses to 20 A for 10, 22, 35 kV

FTCS 10-200/11 fuse base with FTCA 10-15/11 cartridge. FTCS 22-200/11 fuse base with FTCA 22-10/11 cartridge. FTCS 35-200/11 fuse base with FTCA 35-6/11 cartridge. STROJEXPORT

#### 01/095

Outdoor Fuses to 60 A for 10, 22, 35 kV

FTCT 10-200/11 fuse base with FTCB 10-60/11 cartridge. FTCT 22-200/ fuse base with FTCB 22-40/11 cartridge. FTCT 35-200/11 fuse base with FTCB 35-30/11 cartridge. STROJEXPORT

#### 01/097

Three-Pole Air Blast Circuit Breaker CP 1003-10/4000

Rated voltage: 10 kV. Rated current: 4000 A. Output: 1000 MVA.

STROJEXPORT

#### 01/098

Electromagnetic Valve for the Control of QAM Disconnecting Switches, with pneumatic drive

Maximum working pressure: 20 atm. Control voltage: 220 V d. c.

STROJEXPORT

### 01/099

Hand Valve for the Control of QAR **Disconnecting Switches** 

with pneumatic drive. Maximum working pressure: 20 atm. STROJEXPORT

#### 01/100 Switchroom Coupling Valve 00 20-1

Maximum working pressure 20 atm. g. STROJEXPORT

#### 01/101 **Incoming Compartment of** L. T. Switchboard NS-81

with air contactor VMTN 2000-33, 500 V a. c. Rated current: 2000 A. Draw-out STROJEXPORT type.

#### 01/103 Three-Phase Induction Motors

for an output range of 0,6 to 100 kW, four-pole type, copper winding. 14 identical outputs for all speeds and types. STROJEXPORT

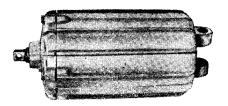
#### 01/105

Small and Very Small Induction Motors STROJEXPORT

### 01/106 Three-Phase Electric Compressors

stationary, portable or mobile for use in beer-shops, for inflating tyres, spraying paints and other purposes. Voltage: 380/220 V. Output: 65 or 135 litres per min. Working pressure: 4 or 5 atm. Maximum pressure: 8 or 10 atm.

STROJEXPORT



01/108

#### 01/108 ZTH Electro-Hydraulic Apparatus

for releasing brakes of cranes and remote control of points, small presses, couplings, valves, various clamping devices, etc. Voltage: 380 V. Power of stroke: 25 to 185 kg. Stroke: 50 to 160 mm. STROJEXPORT

#### 01/109 MRZ Three-Phase Reversing Motors

designed for the drive machine tools and frequent reversing. Voltage: 380/220 V. Output: 4 to7 kW, 1400, 2800 STROJEXPORT r. p. m.



01/106

#### 01/110 D. C. Sets-TDN-S, SDT Motor-Generators

Dynamo voltage: 110, 220, 440 V. Output: up to 25 kW. STROJEXPORT

#### 01/111 TDN-S, SDT Ward-Leonard Set

The voltage can be adjusted from the rated voltage to zero. Output: up to 25 kW. STROJEXPORT

#### 01/112

Outdoor Cable and Box with noncemented insulator for 22 to 35 kV Type KVJ 40 FERROMET

## External Gas Pressure Cable with double lead armour, 110 kV

suitable even for very steep slopes. FERROMET

#### External Gas Pressure Cable, 110 kV

suitable for densely populated and industrial areas. FERROMET

## Rubber cable $3\times150$ sq. mm., 6000 V

serves as a flexible supply line to mobile appliances or sources of power (mine excavators, railway truck mounted power plants, etc.). FERROMET

#### 01/113

Glass-Textile Insulation FERROMET

#### 01/115 Three-Phase Squirrel Cage Induction Motor

flange-mounted, explosion-proof, for danger degree 2, enclosed design E $\times$ 3 MB: 1K42D2 - 380 V, 2,3 kW; 1K81D2 - 380 V, 12 kW; 1K9 1D4 - 380 V, 22 kW. STROJEXPORT

#### 01/116 Three-Phase Squirrel Cage Induction Motor

for use with cranes and heavy mine equipment. HRP52S4 - 380/220 V, 3,2 kW/40 p.c.; HRP72S8 - 380/220 V, 6,6

kW/40 p.c.; HRP1142S6 - 380/220 V, 80 kW/40 p.c. STROJEXPORT

#### 01/117

Electrolytic Dynamos

STROJEXPORT

## 01/118 Automatic Air-Breakers, Air-Breakers,

motor protection, oil immersed, cataract, de-ion. STROJEXPORT

#### 01/119

Unit Head Resistors, Brake Electromagnets, Controllers

STROJEXPORT

#### 01/120 Single-Pole Air- Breakers IJV, IJM

for the protection of lines and singlephase motors. Rated voltage: 500 V a.c. STROJEXPORT

#### 01/121 Equipment for Cranes

(high-capacity fuses, fuse bases, fuse holders, tubular fuses, Spencer's diaphragms, air-pressure switch, plunger switch, dilatation flexible clutch, rail coupling).

STROJEXPORT

### 01/122

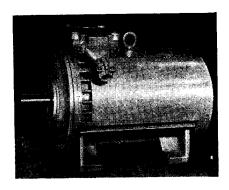
**Limit Switches** 

STROJEXPORT

#### 01/123 Drum Type Switches V25R, V40R, V60R, V100R

for switching electric circuits, motors, for use in switchrooms, etc. Rated voltage: 500 V a. c. STROJEXPORT

01/115





01/124

#### 01/124 Three-Phase Rotor Oil Starters SOR 1 - 5 and SDO 6

for starting slip-ring induction motors. Rated voltage: 500 V a. c.

STROJEXPORT



01/125

#### 01/125

Three-Phase Outdoor Sockets and Plugs ZV 25, ZV 60, VZ 25, VZ 60, VZK 25, VZK 60

for connecting electric circuits outdoors such as farming, building and other machines. Rated voltage of sockets and plugs: 25 A, 380 V a. c. 60 A, 500 V a. c. STROJEXPORT

## 01/126 Disconnecting Switches OD, ODT, ODTU

for high voltages, for use in switchrooms. Rated voltage: 1, 20, 22, 35 kV. STROJEXPORT

#### 01/127 Electric Hand Tools

#### Electric Hand Drill E 603/II

for light metals and wood. Weight: 1.30 kg.

#### Electric Hand Drill EV 213/I

for small assembly jobs. Weight: 4.40 kg.

#### Electric Hand Drill EV 115

(sturdier design). Weight: 5.90 kg.

#### Electric Screwdriver EŠ 110

for screws up to M 10. Weight: 3.90 kg.

#### Electric Grinder EB 15

for finish grinding and cleaning of welds, castings, center grinding and heavy assembling jobs. Weight: 11 kg.

#### Electric Chaser EGS 612/II

for thread cutting of heavy workpieces and assembly work. Weight: 4.80 kg.

#### Power Shears NJ 102

for cutting soft steel plates up to 2 mm in thickness. Weight: 4 kg.

#### Power Shears EN 3

for cutting soft steel plates up to 3 mm in thickness. Weight: 5,80 kg.

#### Electric Mine Drill E 428/II

for drilling deeper bore-holes (up to 6 m) up to 36 mm in diameter in mines and quarries. Suitable for ores, salt, slate, limestone and soft or mediumhard rock. Weight: 15,50 kg.

#### Electric Angle Drill UV 204

for drilling holes in inaccessible places, especially used in the aircraft and motor car body industries. Weight: 2 kg.

MOTOKOV

#### 01/129 Centrifugal Pumps CRN and CRA, Power Operated

for handling water, coolants, etc. Voltage: 380/220 V. Output: 10 to 40 litres per min., 0,2 to 0,4 atm.

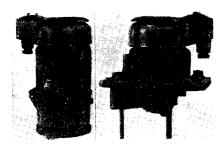
STROJEXPORT

#### 01/130 Shunt Regulator DRV 5/140 M

with cam control and motor drive for the voltage and sped regulation of d. c. shunt motors. TECHNOEXPORT

#### 01/131 Expansion Circut Breaker for High Voltages

35 kV, 1000 A, 600 MVA with pneumatic drive. STROJEXPORT



01/137

## 01/137 Gear Pumps CSP and CSA, Power Operated

for handling oils. Voltage: 380/220 V. Output: 0,5 litre per min., 3 atm., 2 litres per min., 5 atm. STROJEXPORT

#### 01/151 FTR 2000 Filtering Station

Serves for filtering and de-hydration of transformer oils. Nominal output of station 2000 lt./h or 440 Imp. galls./h. Motor input 4.5 to 5.5 kW. Weight 1050 kg or 2315 lbs.



## 01/138 BNT Three-phase and Vertical Grinder

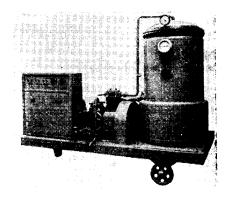
for sharpening tools, grinding forgings and castins, etc. Voltage: 380/220 V. Output: 0,33 to 5,5 kW. MOTOKOV

#### 01/142 One Half of a Large Turbo-Alternator Coil

pressed and pressure compund type, corrosion-proof, with glass and mica-asphalt insulation. Insulation for a working voltage of 15 kV.

TECHNOEXPORT

01/151



#### 02 POWER

#### 02/001 Conveyor Type Stoker

for the combustion of low-grade fuels. It differs from the ordinary type of stocker in that the fire bars are of the travelling type as is the case with L type chain grate stockers. Width of

stocker: 1550 mm. Length: 5410 mm. TECHNOEXPORT

#### 02/002 Block of Flag Boiler Tubes

used for steam boilers (tubes with rolled on flags,  $60 \times 5$  mm in dia).

TECHNOEXPORT

#### 02/003

#### Differential Mercury Pressure Gauge up to 200 atm

Differential pressure up to 800 mm of the mercury column. The milimetre scale slides vertically within a narrow range. The apparatus is mounted on a beam. TECHNOEXPORT

#### 02/004

Differential Pressure Gauge with Oblique Arm for pressures up to 200 atm. g.

Suitable for accurate measurement of small pressure differences. Range: Pressure difference of 20 to 60 mm. of Hg with an accuracy of 1 p. c.

TECHNOEXPORT

#### 02/005

#### Semi-Automatic Sand Filter

two-stage type, for water filtration and softening. Simple and easy operation combined with perfect visibility are the main advantages which these filtres provide even if they are coupled next to each othe. Diameter of filter: 850 mm. Height of filter: 3500 mm. Weight without filling: 1000 kg.

TECHNOEXPORT

### 02/006

Hammer Mill, 14 t/hr

for drying, pulverizing and grading of bituminous and brown coal and lignite with a maximum moisture content of 35 p. c. and 0 to 15 mm in size. Maximum diameter: 20 mm. It is manufactured for outputs of 0,5 to 24 cu metres per hour according to the kind of fuel and the required fineness.

TECHNOEXPORT

#### 02/007

#### Condenser - Steam Cooler

is a part of the steam boiler. It produces condensate from the saturated steam of the main cylinder which is required for cooling the superheated steam to the desired temperature. Cooling surface: 24 sq. metres. Condenser output: 5 to 8 tons per hour. Condenser pressure loss: 0.6 atm.

**TECHNOEXPORT** 

#### 02/008

#### **Fully Automatic Oil Burner**

intended for the combustion of thick or thin oils in smaller boiler units up to a capacity of 8 tons per hour. Capacity of burner: 250 kg. of oil per hour. Oil pressure: 25 atm. g. Combustion air: 60 mm. of the water column. Required viscosity of oil in the burner: 1,5 to 3°E. TECHNOEXPORT

#### 02/009

#### **Turbulence Burner PH 8**

for the combustion of gas fuels with a short flame, especially earth gas. In addition to gas fired or steam boilers it can also be used for the conversion of annealing, drying or other kilns into gas fired units. Capacity of burner: 800 Ncu. metres per hour. Burner gas pressure: 5,000 mm. of the water column. Combustion air pressure in the burner: 80 to 100 mm. of the water column.

#### 02/010

## Slag Removing Equipment (Deslagger)

It crushes large lumps of slag which are dropped down the furnace, and drives off the slag to the outlet. The slag is then discharged into a truck. Capacity: 1500 to 3000 kg of slag per hour (1 or 2 strokes per min. . Size:  $800 \times 800$  mm. TECHNOEXPORT

#### 02/011

#### Air Heater $2.5 \times 2.5 \times 4$ metres

for use with G230 boiler for heating air from 50 to 400  $^{\rm o}{\rm C}.$ 

TECHNOEXPORT

#### 02/012-013

#### Automatic Low-Pressure Boiler P 27

designed to speed up the ignition of pulverized fuels.

#### Automatic Low-Pressure Boiler P 27

for methanefiring. These economic steel boilers are designed for central heating. Low-grade fuels are burned on the grates of this boiler with an efficiency of about 80 p. c. and without producing smoke.

TECHNOEXPORT

#### N2/N14

## **Double Casing Backpressure Steam Turbine**

Efficiency: 16,600 kW, 3000 r. p. m. Inlet steam pressure: 69 atm. a., maximum pressure: 81 atm a. Temperature: 485 °C. Maximum temperature: 500 °C. TECHNOEXPORT

#### 02/016

Runner Blades of a Condensing Turbine, 20 MW TECHNOEXPORT

#### 02/017

High-Pressure Feed-Water Heater

(vertical, two-way type).

Heating surface of the tube nest: 100 sq. metres. Steam pressure: 30 atm.

Water pressure: 150 atm.

TECHNOEXPORT

#### 02/018

## Pressure Oil Burner for the burning of mazout, type TOH-6

The burner atomizes the liquid fuel in order to accelerate its gasifying; by means of a suitable control of the entering combustion air, it is perfectly mixed with the fuel in the burner. Maximum capacity: 600 kg. of oil per hour.

TECHNOEXPORT

#### 02/019

#### Vertical Spiral Casing of a Francis Turbine, Type F 8

to be directly coupled to a three-phase generator. It is designed to operated under a head of 260 metres. Water flow: 10 cu.meters per sec. Capacity: 23,300 kW, 500 r. p. m.

#### TECHNOEXPORT

#### 02/020 Hydraulic Speed Governor, Type HRO VI

for use with a vertical spiral casing Francis turbine. It is designed for the automatic regulation af the speed of the turbine. Capacity: 8000 kgm.

\*\*TECHNOEXPORT\*\*

#### 02/021 HRO VI Pumping Set

**TECHNOEXPORT** 

#### 02/022

#### VK 50 Condensing Steam Turbine

A double-casing type steam turbine of LZP system with five non-regulated bleeders for heating feed-water and for condensate, for use with generator, directly coupled to the turbine. Capacity: 50,000 kV, 3000 r. p. m.Steam pressure: 90 atm. a. TECHNOEXPORT

#### 02/023

## Rotor of a Steam-Gas Turbine of 4.4 MW capacity

The rotor is installed in a blast furnace gas turbine. The wheel which is made of ferric materials, is air cooled, the runner blades are made of POLDI AKNC steel. Inlet temperature of combustion gases: 750 c. 2.82 atm. a. Rotor speed: 8500.

TECHNOEXPORT

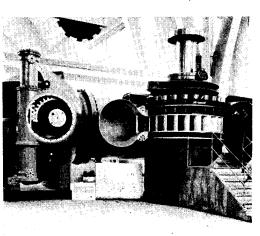
#### 02/024

#### Regulating Equipment of Steam Turbines for Medium Outputs

for use with condensing turbines, condensing turbines with one regulated bleeder and backpressure turbines with regulated backpressure.

TECHNOEXPORT

02/019



#### 02/025

Set of VK 50 Turbine Blades
TECHNOEXPORT

Standard reinforced, rubber-lined, armour, gas-tight or explosion-proof design.

STROJEXPORT

#### 02/027

Air Turbo-Compressor, 6300 cu. metres per hour, 8 atm. a.

for industrial purposes. The turbo-compressor is driven by a 900 kW synchronous motor.

TECHNOEXPORT

#### 02/028

Single-Wheel Turbo-Blower, 10,000 cu. metres per hour, 1.6 atm. a.

for use in chemical, food and other industries. The turbo-blower is driven by means of a 250 kW induction motor. TECHNOEXPORT

#### 02/029 Unit Exhaustor Type JOVUN

designed for the removal of vapours and smoke inside closed vessels and steel structures, as well as for outdoor welding jobs where inlet hoses can be located in close proximity of the weld products.

TECHNOEXPORT

#### 02/030 Industrial Vacuum Cleaner

intended for the cleaning of floors and machines of dust, fly ash, grinding dust, fibres and ashes; it is not suited for greasy and adhesive dust, chips, etc. Fan capacity: 350 to 385 cu. metres per hour.

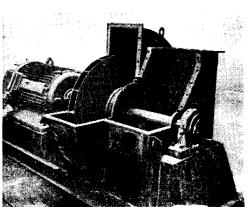
TECHNOEXPORT

#### 02/031 Unit Type SVAREX Exhaustor

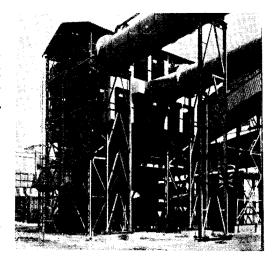
It finds use in welding shops where the welder does not change his place. Fan capacity: 3360 cu. metres per hour. STROJEXPORT

#### 02/032-036 Radial Flow Fans

low-, medium- or high-pressure type, with one or two inlets, and axial control, for air, smoke and other media.



02/028

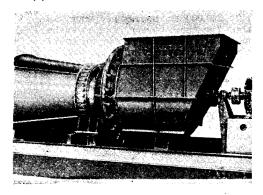


#### 02/033 Dust Extractor

for steel-works, chemical or food industries, power plants, cement factories and heating plants. It consists of indepedent dust extracting units with own fans.

TECHNOEXPORT

## 02/034 Air-Conditioning Unit TECHNOEXPORT



02/037

#### 02/037 Axial Flow Fan, 1600 in dia.

The fan is used in boilers for blasting air into furnaces, in mines and tunnels for air-conditioning and in workshops for the extraction of dust. Capacity: 39 cu. metres per sec. Output of electric motor: 110 kW. Weight of fan including motor: 8400 kg. *TECHNOEXPORT* 

#### 02/038 Model of Vertical Axial Flow Fan

for use in mines and workshops. Capacity: 11,200 cu. metres per min. Electric motor output: 560 kW. Weight of fan including motor and accessories: 137 kg. TECHNOEXPORT

#### 02/039 Electrostatic Separator for Air Cleaning

designed for the removal of solid particles and liquid admixtures in the atmosphere (various kinds of dust, germs, etc.).

TECHNOEXPORT

#### 02/161 Model of a New Type of Stoker

for coal dust and other fuels which are easily baked. 1:20 scale.

TECHNOEXPORT

## 02/162 Model of a Granulating Boiler

Capacity: 125 tons per hour, 100 atm. g. The boiler is suitable for burning grown-

trough brown coal with a calorific value of 2200 to 2500 kal/kg, 20 p. c. ash. and 40 p. c. water-content.

TECHNOEXPORT

## 02/163 Model of a Cyclone Fired Boiler,

for burning bituminous coal of inferior quality and 3080 kcal/kg heating value. Capacity: 75 tons per hour, 40 atm. g., 420 °C. The slag leaves the fire space in a molten state. Computed boiler efficiency: 87.5 p. c. As against standard boilers for unified fuels, this type of boiler provides an economy of 3000 tons of coal p. a. In addition, various economies are obtained in operation due to lower costs of operation and removal of fly-ash and slag. *TECHNOEXPORT* 

#### 02/164

#### Model of G 230 Granulation Boiler with pulverized coal furnace for burning low-grade fuels

The boiler is designed for block-assembly. Rated capacity: 230 tons per hour. Economical output: 280 tons per hour. Maximum working pressure: 100 atm. Working pressure: 96 atm. Maximum operating temperature:  $545\,^{\circ}\mathrm{C}$ .

TECHNOEXPORT

## 02/165 Model of G 330 Steam Boiler

designed for burning brown coal with a heating value of  $2200 \pm 200$  kcal/kg and maximum 45 p. c. moisture content. Rated capacity, 333 tons per hour. Maximum working pressure: 148 atm. Maximum operating temperature:  $565\,^{\circ}\text{C}$ . TECHNOEXPORT

# 02/167 Automatic Katex Flow-Type Filter with continuous regeneration

This filter is designed for uninterrupted softening of water. While two katex filters of the same size are required for uninterrupted operation of other types of filters only one automatic katex filter can be used for the same purpose.

TECHNOEXPORT

#### 02/168

#### Model of a Radiant Steam Boiler

The oil fired boiler has a capacity of 125 tons per hour, 75 atm. g., 525 °C of superheated steam. The boiler is provided with a complete oil economy equipment, including storage tanks, an oil pressure heating station and a repumping equipment for discharging tank wagons. TECHNOEXPORT

#### 02/169

#### Regeneration Boilers for Burning Sulphate Waste Lyes

The panel illustrates the sulphate regeneration process.

#### Model of Regeneration Boiler

for a sulphate cellulose plant. Capacity: 75 tons of perfectly dry reed cellulose per 24 hours, including 25 tons of steam at a pressure of 40 atm. per hour.

\*\*TECHNOEXPORT\*\*

#### 02/171

#### Model of a 100 MW Condensing Steam Turbine

Three casing type, with double exhaust outlet for deep vacuum utilization. Steam pressure: 135 atm. Temperature:  $555\,^{\circ}\text{C}$ . Reheated to  $540\,^{\circ}\text{C}$ . Vacuum: 0.035. TECHNOEXPORT

#### 02/172

#### Model of a Packaged Power Plant, 750 kW

A new type of transportable assembly units of 1500 kW and 750 kW capacity, designed to supply remote places with electric power.

TECHNOEXPORT

#### 02/173

## Refrigerating Turbo-Compressor for Propane-Propylene Mixture

for use in the chemical and food-processing industries. Capacity: 3,200,000 kcal/hour. Drive by means of a 2200 kW synchronous motor.

TECHNOEXPORT

#### 02/174 Air Turbo-Blower

suitable for the largest blast furnaces with a capacity of 1500 cu. metres. Out-

put: 240,000 cu. metres per hour, 3.8 atm. The turbo-blower is operated by means of a condensing steam turbine of a maximum capacity of 17,000 kW.

TECHNOEXPORT

#### 02/175

#### Separator, 315 mm. in dia.

(Multidyne Type)
designed for the separation of all organim and inorganic dusts, with basalt
lining.

CERAMICS

#### 02/176 Various Basalt Hollow Blocks

with metal coating.

Arch, combined arch, pipes, Y and T pieces for various systems of pneumatic or hydraulic transport of hard materials with sharp edges, various castings, hollow blocks and floor-tiles, a straight pipe, 80 in dia. with welded plate coating, a basalt pipe with steel plate coating.

\*\*CERAMICS\*\*

#### 02/177

#### Steel Arch,

blasted for 2160 hours.

#### Basalt Arch,

coated, after 20,400 hours in operation showing only a minimum of wear. CERAMICS

#### 02/178 Redler Conveyor

for handling heavy materials, such as coke, ores, etc.

Y-piece of a Trough CERAMICS

#### 02/179

#### Model of a Double-Drum Steam Boiler, 20 T/hr., 40 atm., 450 °C of Superheating, with Conveyor Type Stoker

The boiler meets even the heaviest operating requirements. The boiler is plated and provided with a light brick lining, carried in tubes in various sections of the boiler. Rated boiler capacity: 20 tons per hour. Maximum working overpressure: 39 atm. g. Maximum working temperature: 450 °C. Feed-water: 105 °C.

#### 03 INDUSTRIAL VALVES

#### 03/040-042 Globe Valves,

Nominal Pressure

400 kg/sq. cm (5600 1b/sq. in.), welded or flanged type, nominal sizes 8 mm, 10 mm, 15 mm, 25 mm, 40 mm, 50 mm (3/8", 1/2", 1", 1 1/2"2"). Inserted disk (cone), rising spindle, stationary. Used for high-pressure pumps. Up to the nominal sizes 40 but with nominal pressure of 540 they serve as equipment of hydraulic presses. *STROJEXPORT* 

#### 03/043-047 Globe Valve, Angle Type,

Nominal Pressure 325 kg/sq.cm (4875 lb/sq. in.). Flange type, nominal sizes from 3 to 120 mm (4.5"), up to a temperature of 200  $^{\circ}\text{C}$  - valves made of carbon steel - and 510  $^{\circ}\text{C}$  (950  $^{\circ}\text{F}$ ) - valves made of alloy steel. Used for chemicals, such as N, H, NH<sub>3</sub> STROJEXPORT

#### 03/048 "Y" Valve,

made of 99,8 pure aluminium; used for strong nitric acid, concentrated, up to a pressure of 5 kg/sq. cm (71 lb/sq. in.) and a maximum temperature of 90  $^{\circ}$ C (194  $^{\circ}$ F). The rising spindle is controlled by a handwheel. Yoke type.

#### STROJEXPORT

#### 03/049 High-Speed Valve,

mounted to the main steam pipe of 12 MW turbines, and above. By means of this valve, turbines are safeguarded against failure of the starting valve. Nominal size 150 mm ("), 200 mm (8") or 250 mm (10").

STROJEXPORT

#### 03/050 Gate Valve for Gases,

Nominal pressure 64 kg/sq. cm (900 1b/sq.in.), yoke type or with stem (spindle) with inside screw. Used for pipe lines and the distribution of coke gas, natural or coal gases. Parallel, cylindrical flange type, handwheel controlled. STROJEXPORT

#### 03/051 Gate Valve for Hydraulic Deslagging,

Nominal Pressure 10 kg/sq.cm (150 lb/sq. in.), flange type. The sealing surfaces of the closure which are welded on by hard metal, and the basalt wedge resist excessive wear during transport of pulverised slag from boiler furnaces by means of pressure water.

#### STROJEXPORT

#### 03/052

#### Gate Valve with Electric Drive

used in the metallurgical industry, for smelting gas, generator gas, coke or mixed gas pipe lines, at a maximum overpressure of  $1.5~{\rm kg/sq.}$  cm (21  $1{\rm b/sq.}$  in.) and maximum temperature of  $400~{\rm C}$  ( $752~{\rm ^{\circ}F}$ ).

#### 03/053

#### Steam Trap, Valve Type,

welded. The valve closure is controlled by means of a bell type plunger. Used for the automatic draining of the condensate from horizontal pipes. Manufactured for nominal pressure of 40, 64 and 100. STROJEXPORT

#### 03/054

#### Main Closure of Boring Bar Probes,

designed to avoid eruptions. Welded. For pressures up to 70 kg/sq.cm (995 1b/in.). The sealing creates two jaws around the boring bar which are compressed by means of spindles and handwheels. STROJEXPORT

#### 03/055

## Reducing Valve with Direct Regulation,

Nominal Pressure 25 kg/sq. cm (350 1b/sq. in), welded, provided with a spring load. The amount of reduced pressure is determined for various pressure ranges. It is used for reducing steam pressure down to 20 kg/cq.cm (300 1b/sq.in.) and a temperature of 400 °C (752 °F).

#### 03/056

#### Feed Valve, Regulation Type,

Nominal Pressure 64 kg/sq. cm (900 1b/sq. in.), provided with two pistons with

cylindrical disks (cones) and regulating holes. It is controlled by means of a thermostat, and serves for the regulation of water, fed into the steam boilers, up to a pressure of 64 kg/sq. cm (900 1b/sq. in.) and a temperature of 300 °C (572 °F). STROJEXPORT

#### 03/057

#### Water Level Gauge with Coloured

up to a pressure of  $120\ kg/sq.\ cm$  (1700  $1b/sq.\ in.$ ). The design of the holder enables the inclined glasses to create

a prismatic space, trapezoidal in crosssection. With the aid of an illuminating equipment and a filter the water column appears green, the **steam co**lumn red. *STROJEXPORT* 

#### 03/058

#### High-Pressure Water Level Gauge,

illuminated, with coloured indication. The glass rollers are arranged against each other in two rows, one of them being offset by half a pitch. Suitable for the highest pressures.

STROJEXPORT

#### **VALVES FOR POWER PLANTS**

#### 03/059

#### Globe Valve, Yoke Type,

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), straight, flanged, with screwed, rising stem (spindle) and handwheel. Suitable for cold or hot water, steam and gases up to 40 kg/sq. cm (600 lb/sq. in.) and a temperature of 450 °C (841 °F). Supplied also with foot as well as regul. cone. STROJEXPORT

#### 03/060 Globe Valve,

Nominal Pressure 64 and 100 kg/sq. cm (900 and 1400 lb/sq. in.). Straight, flanged, yoke and angle type valve with outside screw, controlled by means of a handwheel. Available for nominal pressures of 64 and 100 kg/sq. cm (900 and 1400 lb/sq. in.) and various sizes up to 40 mm ( $1^{1}\!\!/\!\!2$ ") included. They are of metal. Suitable for water, steam and gases up to a maximum of 500 °C (932 °F).

#### 03/061 Globe Valve, Yoke Type,

Nominal Pressure 200 kg/sq. cm (2800 lb/sq. in.). Welded, special design with spring mounted stem. Suitable for liquids, steam and gases up to a temperature of  $400\,^{\circ}\text{C}$  (752  $^{\circ}\text{F}$ ).

STROJEXPORT

#### 03/062-063 Globe Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.). Flanged and welded-on type, up to a maximum temperature of 525 °C (976 °F) with rising stem, controlled by

a handwheel. Nominal sizes of 15 to 50 mm ( $\frac{1}{2}$  to 2"). STROJEXPORT

#### 03/064

#### Globe Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.). Nominal Size 8 mm. Flanged and welded-on type, suitable for a maximum temperature of 525 °C 976 °F) as an accessory for measuring instruments (pressure gauges, etc.).

STROJEXPORT

#### 03/065

#### Globe Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), for superheated steam and measuring diaphragms of steam boilers. STROJEXPORT

#### 03/066

## Non-Return Valve, Nominal Pressure

160 kg/sq. cm (2300 lb/sq. in.), with airtight bonnet. The seating surfaces of the closure are welded with hard alloy. Available in flange and welded-on types. Suitable for water and steam up to a working pressure of 525 °C (976 °F). STROJEXPORT

#### 03/067

#### Vertical Non-Return Valve with Automatic By-Pass

suitable for pressures of 6 to 250 kg/sq. cm (85 to 3500 lb/sq. in.) and nominal sizes of 70 to 200 mm (2¾ to 8"), flanged type. The welded sealing surfaces of the seats in the body and disk are made of stainless steel. The movement of the automatic by-pass closure is connected to the disk.

STROJEXPORT

Approved For Release 2007/08/22 : CIA-RDP80T00246A002500390002-0

#### 03/068

#### Cast-steel Gate Valve, Yoke Type,

Nominal Pressure 16 kg/sq.cm (230 lb/sq.in), flange type, oval, with solid wedge. Long distance control by means of handwheel or electric drive. Also available for nominal pressures of 6 and 10 kg/sq. cm (85 and 150 lb/sq. in.). STROJEXPORT

#### 03/069 Yoke Type Gate Valve,

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), cylindrical, flanged, with spring wedge. Steel. Sizes above 150 mm (6') manufactured with split wedge. The stem (spindle) is carried in a ball bearing. Suitable for water steam, water, nonaggressive gases and nominal pressures of 40, 64 and 100 kg/sq. cm (600, 900 and 1400 lb/sq. in.). Sizes of 40 to 500 kg/sq. cm (1<sup>1</sup>/<sub>2</sub> to 20 lb/sq. in.). Maximum working temperature 550 °C (1022 °F).

#### 03/070-071 High-Pressure Gate Valve,

Nominal Pressures 160 and 250 kg/sq.-cm (2300 and 3500 lb/sq.in.), yoke type with pressure seal bonnet and spring mounted wedge. Flange and welded type connection. Handwheel with shock mechanism. Also available with long distance control. Suitable for water steam up to a working temperature of 525 °C (976 °F). STROJEXPORT

#### **03/072** Steam Trap -

96 atm.,  $525^{\circ}$  C ( $976^{\circ}$  F), made of forded T section, nominal size 200 mm (8"), nominal pressure 160 kg/sq. cm (2300 lb/sq. in.) at a temperature of  $525^{\circ}$  C ( $976^{\circ}$  F), with 3 gate valves, 200 mm (8") in size and 160 kg/sq.cm (2300 lb/sq. in) nominal pressure et a temperature of  $525^{\circ}$  C ( $976^{\circ}$  F) and by-pass 25 mm (1") in size and 250 kg/sq. cm (3500 lb/sq. in.) nominal pressure at a temperature of  $525^{\circ}$  C ( $976^{\circ}$  F). The gate valves are provided with 25 kgm long distance control, or can be push-button or manually operated. STROJEXPORT

#### 03/073 Mix Gate Valve

designed for mixing steam or vapours. Available for nominal pressures of 64,

100, 160 and 250 kg/sq. cm (900, 1400, 2300 and 3500 lb/sq. in.). Three-way, flanged, right-hand or left-hand type; the third flange is designed to carry the steam cooler. STROJEXPORT

#### 03/074

## Low-Load Weight Relief (Safety) Valve,

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), flange angle type. The valve automatically opens as soon as the given pressure is exceeded. Suitable for water, liquids, steam and gases and pressures up to 16 kg/sq. cm (230 lb/sq. in.) at a temperature of 400 °C (752 °F).

#### 03/075 Low-Load Weight Relief (Safety)

Nominal Pressure 100 kg/sq. cm (1400 lb/sq. in.), same type as above. For pressures up to 42 kg/sq.cm (628 lb/sq. in.) and a maximum temperature of 400  $^{\circ}$ C (752  $^{\circ}$ F). STROJEXPORT

#### 03/076 Full-Weight Relief (Safety) Valve,

Nominal Pressure 100 kg/sq. cm (1400 lb/sq. in), double with cover, suitable for draining larger quantities of liquids. Designed for steam boilers and pressures up to 42 kg/sq.cm (628 lb/sq.in.) at a maximum temperature of  $400^{\circ}\mathrm{C}$  (752°F).

#### 03/077

#### Full-Weight Relief (Safety) Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), same as above. Up to 110 kg/sq. cm (1550 lb/sq. in. and a temperature of 400  $^{\circ}$ C (752  $^{\circ}$ F).

ŚTROJEXPORT

#### 03/078 Low-Weight Relief (Safety) Valve, Spring Type,

Nominal Pressure 100 kg/sq. cm (1400 lb/sq. in.), flange, angle-type, with cooling cover. Suitable for higher temperatures for steam, air and gases up to 100 kg/sq. cm (1400 lb/sq. in.) and a maximum temperature of 400 °C(753 °F.) STROJEXPORT

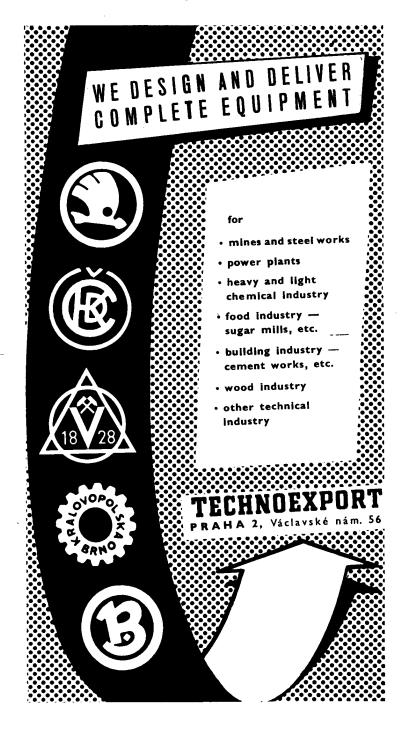
# PragoExport

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#### Full-Weight Relief (Safety) Valve, Spring Type,

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), angle-type, flanged, double; two self-acting relief valves with common inlet and outlet. For steam, air and gases and pressures of 40 kg/sq. cm (600 lb /sq. in.) at a maximum temperature of 300 °C (572 °F).

STROJEXPORT

#### 03/080

#### High-Speed Relief (Safety) Valve with Cooling Cover,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), spring- and angle-type. The cooling extension protects the spring against excessive heat. The design enables rapid opening and draining of an adequate quantity of liquid. Suitable for higher temperatures of steam boilers and pressures up to 125 kg/sq. cm (1750 lb/sq. in.) at a maximum temperature of 500 °C (932 °F). STROJEXPORT

#### 03/081

#### Reducing Valve, Steam Loaded,

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), with straight regulation, directly with diaphragm steam load. Suitable for reducing the pressure of steam and non-aggressive gases, for 25 kg/sq. cm (350 lb/sq. in.) at a maximum temperature of 400 °C (752 °F). STRÓJEXPORT

#### 03/082

#### Reducing Valve, Spring Loaded,

direct regulation, straight, with two seats and metal diaphragms. Designed for reducing steam and gas pressures to 125 kg/sq. cm (1750 lb/sq. in.) and a maximum temperature of (752 °F). Typified valve for blowing boilers at a reduced pressure of 15 to 25. kg/sq. cm (220 to 350 lb./sq. in.). STROJEXPORT

#### 03/083

#### Relief Valve, Diaphragm Type,

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), with direct regulation and spring load. Suitable for reducing steam and gas pressures to 16 kg/sq. cm (230 lb/sq. in.) at a maximum temperature of 200 °C (392 °F). STROJEXPORT

#### 03/084

#### Reducing Valve,

Nominal Pressure 64 kg/sq. cm (900

lb/sq.in.), with direct regulation, straight pistontype, two seats with adjustable weight. Suitable for reducing steam or gas pressure to 64 kg/sq. cm (900 lb/sq. in.) at a temperature of 400 °C STROJEXPORT (752°F).

#### 03/085

#### Lever Loaded Safety Valve,

with indirect regulation, straight, one seat. Operated by an automatic, hydraulic, lever type pressure cylinder, controlled by a pressure regulator, or handwheel. Suitable for reducing steam or gas pressures to 100 kg/sq. cm (1400 lb/sq. in.) at a temperature of 400 °C (752 °F). STROJEXPORT

#### 03/086

#### Lever Loaded Safety Valve, Double Seat Type,

straight, with indirect regulation and two seats. Operated by an automatic, hydraulic, lever type pressure cylinder, controlled by a pressure regulator, or handwheel. Suitable for reducing steam and pas pressures to 100 kg/sq. cm (1400 lb/sq. in.) at a temperature of  $400 \,^{\circ}\text{C}$  (752  $^{\circ}\text{F}$ ). STROJEXPORT

#### 03/087 **Reducing Station**

for reducing steam at a rate of Q = 6.5tons/hr. at a pressure of 16 kg/sq. cm (230 lb/sq. in.) to 12 kg/sq. cm (178 lb/sq.) and from a temperature 380 °C (716 °F) to 200 °C (932 °F). A complete functional mechanism including automatic oil regulation.

#### STROJEXPORT

#### 03/088

#### Blow-Off Valve.

Nominal Pressure 100 kg/sq. cm (1400 lb/sq. in.), flanged, angle-type with renewable seat and disk. Used for interrupted blow-off of steam boilers at various working pressures.

#### STROJEXPORŤ

#### 03/089 **Blow-Off Valve**

Nominal Pressure 160 kg/sq. cm (2300 lb/sq. in.), nominal sizes 15, 25 and 40 mm ( $\frac{1}{2}$ , 1 and  $\frac{1}{2}$ "); flanged and welded-on type. The valve is opened and closed by means of a large handwheel. By applying a small handwheel, impurities from the seating surfaces are STROJEXPORT eliminated.

#### 03/090

#### Blow-Down Valve.

straight, flanged type, with renewable seat. It serves for permanent blowdown of steam boilers. The lift can be STROJEXPORT adjusted on the dial.

#### Blow-Down Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), flanged or welded-on type. The maximum drained quantity is determined by means of the pointer, fitted to the stem in accordance with the indicated lift. STROJEXPORT

#### 03/092

#### Steam Valve.

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), flanged, designed for steam condensation. STROJEXPORT

#### 03/093

#### Steam Valve - Gate Valve Type

The gate valve closure is controlled by a ball plunger. It is used for automatic draining of condensate from horizontal piping. Manufactured for nominal pressures of 16, 25, 40 and 100.

#### STROJEXPORT

#### 03/094

#### **High-Pressure Steam Valve**

provided with pressure sealing cover. The valve closure is controlled by means of a bell type plunger. The valve is used for draining condensate from horizontal piping at nominal pressures of 160 and 250 kg/sq. cm (2300 and 3500 lb/sq. in.) and a temperature of 550 °C (1022 °F). It is fitted with a deaerating valve. STROJEXPORT

#### 03/095

#### Swing Check-Valve

avoids return movement of steam in the piping. Flanged, larger nominal sizes supplied with by-pass. Available for nominal pressures of 10, 16, 25, 40, 64, 100 kg/sq. cm (150, 230, 350, 600, 900, 1400 lb/sq. in.). Made of cast-iron, cast-steel or stainless steel.

#### STROJEXPORT

#### 03/096

#### **Sealing Compensator**

designed for adjusting mechanical or thermal pipe dilation. Available for nominal pressures of 10, 16, 25 and 40

kg/sq. cm (150, 230, 350 and 600 lb/sq. in.) in sizes of 40 to 700 mm ( $1\frac{1}{2}$  to 28 in.) of cast-iron (nom. pressures of 10, 16  $kg/sq.\ cm$  - 150, 230 lb/sq. in.) and sizes of 40 to 500 mm ( $1\frac{1}{2}$  to 20 in.) of caststeel (nom. pressures of 16, 25, 40 kg/sq. cm - 230, 350, 600 lb/sq. in.). STROJEXPORT

#### 03/097

#### High-Pressure Water Gauge "Glas-Mica"

for steam generators up to an overpressure of 90 kg/sq. cm (1350 lb/sq. in.). STROJEXPORT Relief glass.

#### 03/098

#### **High-Pressure Water Gauge** "Glas-Mica" - Relieved

for steam generators up to an overpressure of 125 kg/sq. cm (1750 lb/sq. in.). By means of a holder of special design, absolutely uniform stress on glass during operation is ensured. Relief glass. STROJEXPORT

#### 03/099

#### Long Distance Liquid Level Gauge

Auxiliary gauge, remote controlled from the boiler drum. Maximum working overpressure 125 kg/sq. cm (1750 lb/sq. in.). Mounted between the direct water gauge and connecting flanges. STROJEXPORT

#### 03/100 Reflexion Water Level Indicator

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), for steam boilers, inclinable, provided with high-speed valves and deslagging valve. STROJEXPORT

#### 03/101

#### Feed Valve,

Nominal Pressure 64 kg/sq. cm (900 lb/sq. in.) and a maximum temperature of 300 °C (572 °F). Automatic regula-STROJEXPORT tion.

#### 03/102

#### Feed Valve.

Nominal Pressure 160 kg/sq. cm (2300 lb/sq. in.), with two seats and regulation holes. The valve controle the supply of boiler feed-water up to a pressure of 160 kg/sq. cm (2300 lb/sq. in.) and a maximum temperature (572° F). Automatic regulation.

STROJEXPORT

#### MECHANIZED CONTROL OF VALVES

#### 03/103 Globe Valve

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), straight, flanged type. It is provided with P 500 (P 2000) straight-lined electric drive and standard accessories. Suitable for water, steam and gases in inaccessible places, or for remote control.

STROJEXPORT

#### 03/104

#### Gate Valve with Electric Drive

designed for inaccessible places where mechanized control from one point is required. Available for pressures of 6, 10, 16, 25, 40, 64 and 100 kg/sq. cm (85, 150, 230, 350, 600, 900 and 1400 lb/sq. in.) in all nominal sizes. Including standard accessories for a. c.

STROJEXPORT

#### 03/105

#### Gate Valve with Electric Drive

Nominal Pressure 6 kg/sq. cm (85 lb/sq. in.), for cold or hot water, low-pressure steam and gases. Supplied with electrical equipment for a. c.

STROJEXPORT

## 03/106 Gate Valve - Yoke Type with Electric Drive

and Cleaning Cover, Nominal Pressure 10 kg/sq. cm (150 lb/sq. in.) designed for impure water, liquids and gases with sedimenting compounds. Available with handwheel, for remote control, manual or mechanized electric drive.

STROJEXPORT

#### 03/107 Hydraulic Gate Valve

designed, above all, for water-works, for mechanized or remote control. Available for 6, 10, 16 kg/sq. cm (85, 150, 230 lb/sq. in.) in sizes of 80 to 1200 (3 to 48 in.). The valve is held in

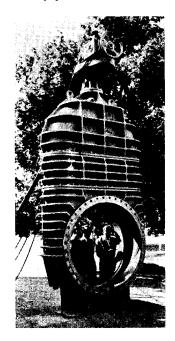
position by means of a locking lever.

STROJEXPORT

## 03/108 Stand for Remote Control of Valves

Supplied with 25 kgm or 50 kgm electric drive for a. c. voltages of  $3\times220/$ 

380 V,  $3\times500$  V, for valves with handwheel or electric by-pass control or without by-pass. STROJEXPORT



03/104

#### 03/109

### Straight Globe Valve of Stainless Steel

flanged, yoke type with rising stem. Suitable for aggressive liquid and gases up to pressures of 16 and 40 kg/sq. cm (230 and 350 lb/sq. in.) and a maximum temperature of 300  $^{\circ}$ C (572  $^{\circ}$ F).

STROJEXPORT

#### 03/110

#### Straight Globe Valve of Stainless Steel

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), flanged, yoke type, for chemically active chemicals, especially used in the food industry. STROJEXPORT

#### VALVES FOR CHEMICALS

#### 03/111

#### Straight Globe Valve of Non-Ferrous Metals

flanged, yoke type with rising stem (spindle) and handwheel. Suitable for slghtly aggressive liquid up to a pressure of 16 kg/sq. cm (230 lb/sq. in.) and a temperature of 200  $^{\circ}$ C (392  $^{\circ}$ F).

STROJEXPORT.

#### 03/112

#### Straight Globe Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), flange type, with rising stem (spindle) and inside screw, handwheel controlled. Suitable for liquid ammonia and ammonia gas. Up to nominal size 50 they are produced forged.

STROJEXPORT

#### 03/113

## Angle-Type Globe Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), flanged, with rising stem (spindle) and inside screw. Suitable for liquid ammonia and ammonia gas. Up to a size of 50 mm (2") forged, larger nominal sizes are made of cast-steel. STROJEXPORT

#### 03/114

### Straight Non-Return Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), flanged with cover. It eliminates automatically return-flow. Caststeel, suitable for liquid ammonia and ammonia gas.

STROJEXPORT

#### 03/115

## Angle-Type Non-Return Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.),flanged with cover. Returnflow is automatically eliminated. Caststeel. Suitable for liquid ammonia and ammonia gas.

STROJEXPORT

#### 03/116

## Straight Regulation Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), flanged, with rising stem (spindle) and inside screw, handwheel

controlled. Suitable for liquid ammonia and ammonia gas. STROJEXPORT

#### 03/117 Sample Valve

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), angle-type, welded, rising stem, moving cone. It is intended for the flux of aggressive materials.

STROJEXPORT

#### 03/118

#### "Y" Valve of Stainless Steel

straight, flanged type with rising stem and handwheel. Suitable for aggressive liquids and gases up to a pressure of 16 kg/sq. cm (230 lb/sq. in.) and a temperature of 300 ° C(572 °F).

STROJEXPORT

## 03/119 "Y" Valve, Rubber-Lined

flanged, yoke type with rising stationary stem (spindle) and handwheel. All surfaces which are in contact with the liquid, are rubber-lined to meet the properties of the liquid. Suitable for chemicals, such as concentraded acids and lyes.

STROJEXPORT

#### 03/120

## Straight Non-Return Valve of Stainless Steel

flanged. Return-flow is automatically avoided. The valve is designed for aggressive liquids and gases up to 16 or 40 kg/sq. cm (230 or 350 lb/sq. cm) and a temperature of 300 °C (572 °F). Straight or angle-type. STROJEXPORT

#### 03/121 Head Gate Valve

Nominal Size 15 up to 50 mm (1/2 to 2"), screw or flange type, for nominal pressures of 6, 10, 16 and 25 kg/sq. cm (85, 150, 230 and 350 lb/sq. in.). The valve is made of cast-iron or non-ferrous metals. It is suitable for hot or cold water. liquids and gases.

STROJEXPORT

#### 03/122 Welded Gate Valve, Yoke Type

Nominal Pressure 16 kg/sq. cm (230 lb./sq. in.). The valve is a prototype of

economic design. The split wedge on the ball ensures the reliability of the closure.

STROJEXPORT

### 03/123

#### Gate Valve for Thick Liquids

Nominal Pressure 2.5 kg/sq. cm (35 lb/sq. in.), double, flat, yoke type with knife cover plate. The valve is entirely made of non-ferrous metals. It is suitable for viscous and thick liquids with small particles of impurities or dissolved materials up to a working overpressure of 2.5 kg/sq. cm (35 ib/sq. in.) and a temperature of  $150\,^{\circ}\mathrm{C}$  ( $302\,^{\circ}\mathrm{F}$ ).

## 03/124 Gate Valve for Thick Liquids

Nominal Pressure 6 kg/sq. cm (85 lb/sq. in.), flanged, plate type, with one side sealing only. Nominal sizes 80 to 250 kg/sq.cm (1200 to3500 lb/sq. in.), with rising stm, handwheel operated. Suitable for thick materials up to a working over-pressure of 6 kg/sq. cm (85 lb/sq. in.) and a temperature of 120 °C (217 °F).

#### 03/125 Rubber-Lined Gate Valve

Nominal Presure 6 kg/sq.cm (85 lb/sq. in.), designed for chemicals, i.e. acids and lyes. All surfaces which are in contact with the liquids, are rubberlined. STROJEXPORT

#### 03/126

#### Rubber-Lined Gate Valve

Nominal Pressure 10 kg/sq. cm (150 lb/sq. in.), see above. STROJEXPORT

#### 03/127

#### Relief (Safety) Valve of Stainless Steel

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), low-weight, spring, angle-type with relief lever. Suitable for aggressive liquids, vapours and gases up to pressure of 13 kg/sq. cm (192 lb/sq. in.) and maximum temperature of 200  $^{\circ}$ C (392  $^{\circ}$ F). STROJEXPORT

#### 03/128 Stuffing Cock

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), flanged, straight or tree-way type (T or L section) in sizes of 15 to 150 mm ( $\frac{1}{2}$  to 6 in.) for nominal press-

ures of 6, 10 and 16 kg/sq. cm 85, 150 230 lb/sq. in.). Suitable for liquids, vapours and gases. Designed to improve the sealing. Executed of cast iron as well as non-ferrous metals.

STROJEXPORT

#### 03/129

#### **Stuffing Cock**

Nominal Pressure 10 kg/sq. cm (150 lb/sq. in.), made of stainless steels. Flanged, straight or three-way type (T or L sections) in sizes of 15 to 150 mm (1/2 to 6 in.). Suitable for aggressive chemicals.

#### 03/130

#### Cock with Heating Jacket

Nominal Pressure 10 kg/sq. cm (150 lb/q. in.), flanged, straight or three-way type with T section. Steam or oil of a maximum temperature of 150 °C (302 °F) and 2.5 kg/sq.cm (35 lb/sq.in.) pressure, passes through the heating jacket. Suitable for solidifying materials up to a pressure of 10 kg/sq. cm (150 lb/sq. in.) and a maximum temperature of 200 °C (392 °F).

#### 03/131

#### Cock with Relief Disk (Cone)

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.). Before adjusting the disk, it is lifted by means of the lever. After setting the desired opening position, the disk is pressed again into the body. Available in straight, or flange type, for agressive liquids of various concentration.

#### 03/132

#### Horizontal Sight-Window

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of non-ferrous metals. By means of the sight-window, the condition or flow of less agressive liquids are ascertained. Maximum pressure 16 kg/sq.cm (230 lb/sq.in.). Flanged, with two sight-glasses.

STROJEXPORT

#### 03/133

#### Horizontal Sight-Window

Nominal Pressure 16 kg/sq. cm (85 lb/sq. in.), made of aluminium. By means of this sight-window, the condition or flow of less aggressive liquids is ascertained to a maximum pressure of 6 kg/sq.cm (85 lb/sq.in.).

STROJEXPORT

#### 03/134 Horizontal Sight-Window

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of stailess steel. By means of this sight-window, the condition or flow of aggressive liquids up to a maximum pressure of 16 kg/sq. cm (230 lb/sq. in.) are ascertained.

STROJEXPORT

#### 03/135 Vertical Sight-Window

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of cast-iron. The inner surfaces are rubber-lined to resist concentrated acids and lyes.

STROJEXPORT

#### 03/136

#### Level Gauge with Valve Heads

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of stainless steel, with protective tube. Suitable for chemicals. STROJEXPORT

#### 03/137

### Level Gauge with Cock-Stuffing Heads

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of broze, with protective tube. Suitable for liquids, chemically active. STROJEXPORT

#### MISCELLANEOUS VALVES

#### 03/138 Globe Valve

Yoke Type, Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), straight, flanged with rotating stem and handwheel. Suitable for cold or hot water, steam and gases up to 16 kg/sq. cm (230 lb/sq. in.) and a maximum temperature of 200 °C (392 °F). Angle-type valves and with regulation disk are also supplied.

STROJEXPORT

#### 03/139 Straight Non-Return Valve

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), flange type. Return-flow is automatically avoided. Suitable for water, liquids, steam and gases up to a temperature of 200 °C (392 °F). Also available for higher nominal pressures. STROJEXPORT

### Non-Return Valve, Angle-Type

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), flange type. Return-flow is automatically avoided. Suitable for water, liquids, steam and gases up to a temperature of  $200\,^{\circ}\text{C}$  (392  $^{\circ}\text{F}$ ).

`STRÓJEXPORT

#### 03/141 Globe Valve, Cross-Type

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), fianged, yoke- and three-way-type, with handwheel. When opened, the liquid is divided into the two outlets. Suitable for water, liquids, steam and gases.

STROJEXPORT

#### 03/142

## Gate Valve, Yoke Type, for Hot Crude Oil

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.). The valve finds use in oil refineries. Carbon steel, alloy-or stainless-steel. STROJEXPORT

#### 03/143

#### Gate Valve for Hot Crude Oil

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), cylindrical, flanged, with fixed wedge, yoke type with handwheel. Manufactured in carbon, alloy or stainless steel. STROJEXPORI

#### 03/144

#### Gate Valve for Hot Crude Oil

Nominal Pressure 160 kg/sq. cm (2300 lb/sq. in.), cylindrical, flanged, with fixed wedge, yoke type with handwheel. Up to  $450\,^{\circ}\mathrm{C}$  ( $842\,^{\circ}\mathrm{F}$ ), the wedges and seats are not welded-on. Manufactured in carbon, alloy or stainless steel.

#### STROJEXPORT

#### 03/145 Crude Oil Gate Valve, Flanged

Especially robust design, cast-steel. Designed for deep bores, oil pipe lines, flushing water and natural gases. Manufactured for the maximum permitted overpressures of 50, 70, 105 and 350 kg/cm². STROJEXPORT

#### 03/146

#### Crude Oil Gate Valve, Screwed Type

Especially robust design, cast-steel. Designed for deep bores, oil pipe lines,

flushing water and natural gases. Range of pressures same as in No 03/145. STROJEXPORT

#### 03/147

#### Cast-Iron Gate Valve

Nominal Pressure 6 kg/sq. cm (85 lb/sq. in.), flanged, flat, with fixed wedge. Suitable for cold or hot water, low-pressure steam and gases.

STROJEXPORT

#### 03/148 Cast-Iron Gate Valve

Nominal Pressure 10 kg/sq. cm (150 lb/sq. in.), flanged, oval, with fixed wedge. Suitable for cold or hot water, low-pressure steam and gases.

STROJEXPORT

## 03/149 Relief (Safety) Valve, Low Weight, Spring Type

flange-type, pressure-sealed. Suitable for steam, air and gases up to 16 kg/sq. cm (230 lb/sq. in.) and a maximum temperature of 350  $^{\rm o}{\rm C}$  (630  $^{\rm o}{\rm F}$ ).

STROJEXPORT

#### 03/150

#### Relief (Safety) Valve, Low Weight, Spring Type

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), angle-type, flanged, with covered spring and relieving lever. Suitable for water, steam, air and gases up to 40 kg/sq. cm (600 lb/sq. in.) and a temperature of 300 °C (572 °F).

STROJEXPORT

#### 03/151

#### High-Speed Relief (Safety) Valve

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), spring-, angle-type, flanged. The design of this valve enables its rapid opening and the draining of an adequate quantity of the liquid. Suitable for steam boilers up to a pressure of 40 kg/sq. cm (600 lb/sq. in.) and a temperature of 300  $^{\circ}$ C (572  $^{\circ}$ F).

STROJEXPORT

## 03/152 Reducing Valve with Direct Regulation

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), straight, with diaphragm and spring load. Designed for reducingt water pressure to 16 kg/sq. cm (230 lb/sq. in.) and temperature to  $50\,^{\circ}\text{C}$  (122  $^{\circ}\text{F}$ ).

#### 7 /4 E T

Nominal Pressure 16 kg/sq. cm (250 lb. sq. in.), straight, spring loaded with double relieved disk. The rubber diaphragm is protected by a water column against higher temperatures of liquids. Suitable for liquids, steam and gases from the lowest opening pressures up

By-Pass Valve, Diaphragm Type

to 6 kg/sq. cm (85 lb/sq. in.) and a temperature of 300 °C (572 °F).

STROJEXPORT

#### 03/154

#### Two-Stage Relief Valve

The valve closes the pipe in case of breakdown. It is actuated by impulses from the pipe where the pressure has been increased or reduced.

It finds use with pipes for all kinds of gases and air up to maximum permissible working overpressure of 13 kg per sq. cm and a temperature of 30  $^{\circ}$ C. STROJEXPORT

#### 03/155

## Non-Return Butterfly Valve, 800 in dia.

The valve is used with pumps and various installations for a maximum working overpressure of 2,5 kg per sq. cm. and a temperature of  $100\,^{0}\text{C}$ .

STROJEXPORT

#### 03/156

### Reflex Valve Water Gauge,

#### 25 in dia.

The valve finds use with fuel tanks, 1200 mm long. It is also produced with a double holder for a length of 4500 mm.

STROJEXPORT

#### 03/157

#### Oil Economy for ČKD

#### **Transformers**

serves for cleaning or regeneration of transformer oil. It is installed in BAI express train carrlages, and contains:

- a) 1 vaccum filter
- b) 1 double regenerating plant
- c) 1 control panel
- d) Pumps
- e) 2 manipulating tanks
- f) Auxiliary equipment STROJEXPORT

#### 03/158

#### Precision Reduction Valve

for wet and overheated steam, mercury regulated, for any pressure or temperature, used for gasses and air.

## 04 MACHINES FOR THE CHEMICAL INDUSTRY

#### 04/001 Spiral Heat Exchanger, Type K-K

The machine is used for gases and liquids in the chemical industry. It is suitable for undertakings where small size and relatively highly efficient exchangers are required. Heat exchanger surfaces: 30 sq.metres. The liquid is in both sections of the exchanger. Working pressure: 3 atm. g.

TECHNOEXPORT

#### 04/002 High-Pressure Exchanger, 110 sq.m.

The exchanger is a part of the equipment for the production of ethanol. It is of tubular type with a floating head. The shell, 870 mm. in outer diameter, is electrically welded of two parts, and has one inlet and one outlet neck. The channel cover is on the other end of the shed. The tube sheet of the exchanger tube bundle is fitted between the flanges of the sheel and the channel cover. The tube bundle is rolled in two tube sheets.

\*\*TECHNOEXPORT\*\*

#### 04/003 Concentric Cylinder Heat Exchanger

The surface of the exchanger consists of a system of vertical cylinders which are inserted concentrically into one another. Since their diameters are graded, an intercircular space is formed between the cylinders. The exchanger finds a wide field of application, especially in the chemical industry for "liquid-liquid", "vapour-liquid", "gasliquid" or "gas-gas"; it can also be used as an evaporator heating element or vapour condenser. Surface: 16 sq. metres. Overpressure: 6 atm. Weight:

670 kg.

TECHNOEXPORT

#### 04/004

Combined Heater and Exchanger, 100,000 kca l/hr.

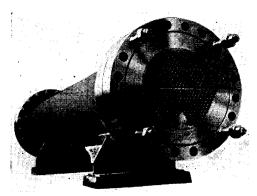
A water heater with sludge exchanger.

Advantages: Easy essembly, safety in operation, higher output per unit of weight.

TECHNOEXPORT



04/002



04/002

#### 04/005-009 Dry Rotary Low-Pressure Gas Meter

The gas meter measures the quantity of gas manufactured in gasworks as well as the demand of gas in all fields of industry. Sizes: 2000 cu. metres per hour, 700 cu. metres per hour, 130 cu. metres per hour or 300 cu. metres per hour.

\*\*TECHNOEXPORT\*\*

#### 04/010 Autoclave

The autoclave is used for chemical reactions under pressure in various protective surroundings. Capacity: 3000 litres. Working pressure: 25 atm. g.

\*\*TECHNOEXPORT\*\*

#### 04/011

#### Drum Type Chamber Filter

The drum type chamber filter is used chiefly for the densification, dehydration and washing of cellulose. It is a rotary, drum type chamber filter for continuous operation. Capacity: 140 tons/24 hours.

TECHNOEXPORT

#### 04/012

#### **Electrostatic Separator**

The electrostatic separator is used for the condensation of fine particles of tar in coal gas, coke gas, etc. Capacity: 1000 cu. metres per hour. Efficiency: up to 99.9 p. c. TECHNOEXPORT

#### 04/013

#### Stream Gas Washer

The washer consists of a jet, diffusor, stream filter, injector and auxiliary attachmets (pump, fan). It cleans producer gas: It is made of steel plate, 4 mm. thick. Quantity of gas: 5000 cu. metres per hour. Gas temperature: 55 °C. Concentration of gas contamination: 0.4 to 0.7 gr./cu. metre.

#### TECHNOEXPORT

#### 04/016 Catalytic Purifier

The purifier is a high-pressure forged body from a cylindrical shell.

#### **TECHNOEXPORT**

#### 04/017 Wound Scrubber

The apparatus serves for separating some elements of the gas mixture by means of a liquid absorbent of instance for the elimination of carbon dioxide in syn-gas by means of ammonia water.

#### **TECHNOEXPORT**

#### 04/018 Water Treating Unit

Capacity: 2 litres per sec. The unit which is of compact design, ensures continuous supply of drinking water at a rate of 2 litres per sec. It consists of a flanker, sandfilter, diluting tanks, a measuring pump and two centrifugal pumps for priming and repumping water.

TECHNOEXPORT

#### 04/019

## Hydrocyclons for sorting fine and coarse solid fractions in liquids

#### CERAMICS

#### 04/020 Various Basalt Hollow Blocks

Arch, combined arch, sewage pipes, Y and T pieces, used for hydralic or pneumatic conveyance of hard and sharp materials and in acid environment.

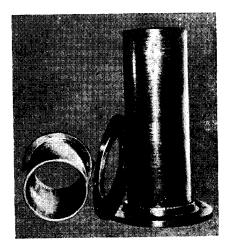
#### CERAMICS

#### 04/021

## Various Castings, Hollow Blocks and Floor-Tiles

A part of the lining of a rotary tube mill for grinding cement, ceramic raw materials, etc.

CERAMICS



#### 04/022

#### 04/022 Laminated Pipes

Sections of pipes of various diameters and wall-thicknesses, including fittings, designed to meet the pressure and operating requirements. CERAMICS

#### 04/023

#### **Pressure Filter**

suitable for filtering arsenic acid, boracic acid and ethyl alcohol. Working pressure in the filter: up to 5 atm. Approximate working temperature:

200 °C. The welded filter is provided with a removable cover, to which the mixing equipment is attached. Weight: 4250 kg.

TECHNOEXPORT

where the solid phase has to be separated from the liquid phase. Filtering area: 0.1 sq. metre. Weight: 36.5 kg. TECHNOEXPORT

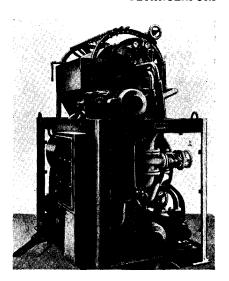
#### 04/025 Extraction Column

The extraction column 1000 is a vertical cylindrical vessel with a deep arched bottom. Inside the column are 15 trays on welded angular rings. The trays are divided into sections which can be extracted through four manholes, 500 mm. in dia., welded to the shell. It finds use in the selective refining process of mineral oils. TECHNOEXPORT

#### 04/026 Laboratory Filter 3 KT 1

The laboratory filter is used in the chemical, food, cellulose or pharmaceutical industries.

Continuous filtration finds a wide field of application, to-day, in industries



## 05 FOUNDRIES AND FOUNDRY EQUIPMENT

#### 05/001 Die-Casting Machine CLP 8515-2

The machine is suitable for working up zinc, aluminium, copper, magnesium and other alloys of non-ferrous metals up to 0.60 kg. (aluminium alloys), 1.60 kg (zinc alloys) and 1.25 kg. copper alloys) in weight. Fully hydraulic control. Average output: 100—200 operations per hour. Maximum die-closing force: 85,000 kg. Weight: 3,000 kg. STROJEXPORT

## **05/002**Pressure Die-Casting Machine CLP 500.70

The machine is suitable for working up aluminium, magnesium, zinc, copper and other alloys of metals with a casting temperature beliw 1000 °C and about 12 kg. in weight.

Fully hydraulic control. The machine is provided with RP 30 pump with a capacity of 100 litres per min. at a pressure of 120 atm., and AK 7.5 hydropneu-

matic accumulator of 750 litre capacity. Output: 10 to 50 operations per hour. Weight: 22,500 kg.

STROJEXPORT

#### 05/003 Semi-Automatic Pressure Die-Casting Machine CLP 180.30

The machine is suitable for working up aluminium, zinc, copper, magnesium and other alloys of nonferrous metals. Die-closing force: 180 tons. Pressure: 30 tons.

Semi-automatic control, i. e. the working cycle is automatic until the die is opened.

STROJEXPORT

#### 05/004 Mobile Foundry Screen SSP 60

used for screening smaller quantities of sand. The machine can be transported. The vibrating movement is obtained by means of weights, eccentrically mounted on a disc which is carried at the end of the driving shaft. Height:

1630 mm. Electric motor: 1.1 kW, 900 r. p. m. Approximate output: 1.5 cu. metre per hour. Approximate weight: TECHNOEXPORT 90 kg.

#### 240 460 700 1300 900 mm. 2.5 5 5.5 6 8 kg. Weight **TECHNOEXPORT**

#### 05/005 Oscillating Grinder KB 40

The machine serves for surface machining of steel castings. It is especially suitable for removing seams in the joints of castings, slag on billets as well as for grinding the flaws of castings. Two electric motors: 2 kW, 2810 r. p. m. Grinding wheel dia.: 400/50×153 mm. Maximum peripheral speed of grinding wheel: 45 metres per sec. Approximate weight: 280 kg. TECHNOEXPORT

#### 05/006 Grinder SB 75

The machine is intended for grinding medium heavy castings. Easy renewal of Vee-belts. Improved exhaust. Two grinding wheels,  $750/305 \times 80$  mm. in. dia. 2 electr. motors, 7.5 kW, 1440 r. p. m. Maximum peripheral speed of grinding wheels: 45 metres per sec. Approximate TECHNOEXPORT weight: 1650 kg.

#### 05/007 Jarring Machine ISS 1-P

with moulding box lifting mechanism for the manufacture of sand moulds. The jar ram moulding mechanism ensures perfect thickening of the sand in the box and danmps the impacts on the base. Clamping pressure: 4000 kg. TECHNOEXPORT Weight: 1300 kg.

### Jet Sand Blasting Machine TS 2000.1

with work table. This machine is designed for cleaning castings and suitable forgings up to 35 kg. in weight. The machine does not require a special foundation with assembly holes. Diameter of rotary table: 2000 mm. Weight: 3250 kg. **TECHNOEXPORT** 

#### 05/009 Pneumatic Upsetting Machine

designed to speed up the foundry forming operations. Five types are available.

#### 05/010 Revolving Furnace

for all types of heat treatment. Output: 1000 kg. per hour. Useful working space: 2700 in dia. Width of furnace hearth: 850. Maximum height: 475. Output: 500 kg./hr. Useful working space: 2150 in dia. Width of furnace hearth: 650. Maximum height: 400. Maximum temperature: 1000 °C. Speed of the machine: 1 to 4/hr. Output of electric motor: 2.2 kW. Weight of furnace: 23,000 kg. STROJEXPORT

P1 P2 P3 P4

#### 05/011 Model of a Steel Foundry

Capacity: 9000 tons of castings per a. at 2.2 shifts. Maximum weight of casting: 1500 kg. 90 p. c. of castings are machine-made, 60 p. c. are made in the raw state. Two electric melting cupola furnace, one induction furnace. **TECHNOEXPORT** 

#### 05/012 Forge and Pressing Shop Model

Capacity: 38,000 tons of forgings and pressings per a. at 2.3 shifts, i. e. forgings up to 700 kg. in weight die forgings up to 80 in weight hot or cold treated pressings of sheets and wide **TECHNOEXPORT** steels.

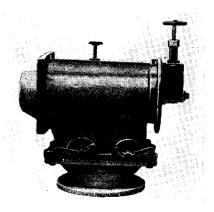
#### 05/014 Injection Burners

By means of these burners the kinetic energy of pressure gas is utilized and a perfect mix for all kinds of clean gases STROJEXPORT is obtained.

#### 05/015 Universal Turbulence Gas Burner

for the combustion of all low-pressure gases, cleaned or not cleaned. STROJEXPORT





#### **05/016** Heating Oil Burner

for thin liquid types of heating oils, for use with heating plants operating under higher temperatures. STROJEXPORT

#### 05/017

Advanced Casting Methods Refined 06 Silicon Cast-Iron

#### Rational Production of Precision Castings into chemically treated moulds

The setting of the moulding machine ensures the manufacture of perfect moulds from chemically treated sands which are suitable for the production of light precision castings.

## Core Blasting from Chemically Treated Sands

The chemically treated sands are especially suitable for core blasting.

## Casting of a Dredger Swing Superstructure

made by means of CT sand. The casting is 5200 kg. in weight. By means of the chemically treated mixture economies of 20 p. c. have been obtained.

#### **Exothermic Linings of Risers**

are designed to increase the temperature of the metal so that steel can be utilized by 75 to 85 p. c. or even more. The recommended mixtures react slowly, with a delay of about 10, 60 or 100 seconds.

#### **Chill Moulding Mixtures**

are superior to pulverized resin mix-

#### Czechoslovak Moulding Sands

their qualities, geological origin and geographical position of the beds. The applicability of the various kinds of these sands to the individual metals is demonstrated. STROJEXPORT

## CZECHOSLOVAK HEAVY INDUSTRY

scientific and technical monthly for engineering and heavy industry

#### 06 FORMING MACHINES

#### 06/001

#### Straight-Sided Deep Throated Press especially designed for blanking operations in multiple part production

Rated presure	10 tons
Stroke	8 to 60 mm.
Throat	140 mm.
Distance between columns	180 mm.
Dimensions of table	280×400 mm.
Output of electric motor	1.1 kW
Weight	860 kg.

STROJEXPORT

#### 06/003

## Gap Frame Eccentric Press with fixed table LE 250

for heavy blanking, cutting, bending as well as shallow drawing work.

Rated pressure	250 tons
Stroke of ram	30 to 140 mm.
Throat	400 mm.
Dimensions of table	1120×800 mm.
Output of electric motor	20 kW
Weight	12,110 kg.
	STROJEXPORT

### 06/005

#### Straight-Sided Crank Press LTL 160/1100

this machine is suitable for drawing guards, doors and other parts of motor car bodies, as well as fuel tanks, brake drums of disc wheels and kitchenware.

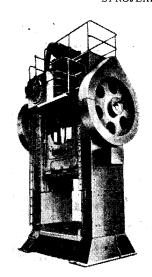
Rated pressure of ram 25 mm. before the lower dead point	160 tons
Clear width below guideways	1100 mm.
Maximum drawing depth	260 mm.
Stroke of ram	560 mm.
Dimensions of table	1100×1100 mm.
Output of electric motor	30 kW
Weight	33,600 kg.
	STROJEXPORT

#### 06/002

#### Gap Frame Eccentric Press LE 100

is intended for blanking, cutting bending as well as shallow drawing work in multiple part production.

Rated presure	100 tons
Throat	320 mm.
Maximum distance ram to	•
ta ble	400 mm.
Stroke of ram	20 to 120 mm.
Dimensions of table	900×640 mm.
Output of electric motor	7 kW
Weight	5500 kg.
-	STROJEXPORT



06/004

#### 06/004

#### Straight-Sided Crank Press LKT 250/160

intended for shallow drawing and blanking work in single or multiple part production, such as drawing bonnets, doors and other parts of motor car bodies, refrigerators, ranges, etc.

Rated presure
Stroke
Width of frame below
guideways
Dimensions of table
Output of electric motor
Weight

250 t 250 mm. 1600 mm. 1580'×1150 mm. 28 kW

25 tons STROJEXPORT

#### **Power Driven Curve Cutting** Shears NOT 100/4

intended for cutting the irregular edges of parts produced by large drawing presses, such as mudguards, motor vehicle radiator parts, various motor vehicle body parts, such as window frames, doors, etc. It is also suitable for cutting curves and various shapes from metal sheets.

Radius Maximum thickness of steel cut of a tensile strength of 40 kg./sq. mm. Output of electric motor

4 mm. 2550 kg. STROJEXPORT

1000 mm.

#### 06/007 Bending Machine XO 100/1

hand operated, suitable for use in tinsmith's shops and factories for the production of metalware, for simple bending of sheets up to a length of 1000 mm. and 1 mm. thickness. Various radii of bend are obtained by changing the bending bar of the upper bending cheek.

Length of bend Maximum thickness of sheet of a tensile strength of 40 kg./sp. mm. Clear width between side Maximum stroke of upper bending cheek Weight

1 mm. 1070 mm.

1030 mm.

115 kg. STROJEXPORT

#### 06/008

#### Three Roller Rounding Machine X Z M 200/2, power operated

intended for rounding cylindrical or tapered shapes and partial straightening of sheets. Especially suitable for the production of barrels, shells of boilers, flues, pipes, etc.

Working length 2020 mm. Maximum thickness of rounded, sheet 40 kg./sp. mm. in tensile strength Minimum diameter of 2 mm. rounded cylinder 112 mm. Maximum working speed per min. 2000 kg. 8.25 metres Weight STROJEXPORT

#### 06/010 Friction Screw Forming Press LFK 400/700

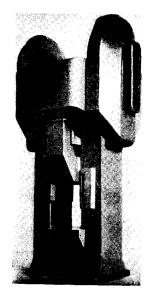
intended for accurate work in forging dies as well as for calibrating, stamping, straightening and bending operations. The force of blow is controlled by means of the program control equipment by adjusting the height of stroke according to the type of the forging.

Rated pressure Maximum stroke Clear width below guideways Output of electric motor Weight

400,000 kg. 450 mm.

700 mm. 22,000 kg.

STROJEXPORT



06/010

#### 06/011 **Swaging Machine KRT 63**

suitable for gauging and stepping solid or tubular material of large dimensions. The operation is fast without wastage in material.

Maximum diameter of solid material handled by hot swaging 125 mm. Maximum diameter of solid material handled by cold Maximum diameter of tubular material handled by cold or hot swaging Maximum length of work 125 mm. swaged in one operation Output of the electric motor of swaging mechanism 45 kW

63 mm.

295 mm.

STROJEXPORT

#### 06/012 **Rotary Swaging Machine KRA 8**

This fully automatic machine has been designed as an automatic production machine with a view to uninterrupted operation. It is intended for rotary swaging of various materials in forging die.

Maximum diameter of solid material handled by cold swaging Maximum diameter of solid 8 mm. material handled by hot swaging Maximum diameter of 12 mm. tubular material handled by cold or hot swaging Diameter of bore of 16 mm. spindle Number of blows of die 22 mm. Output of electric motor Weight 2.2 kW 1750 kg.

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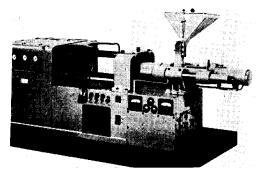
#### 06/013 Spring Hammer AJAX 2 A

suitable for various hot forging operations, for use with standard or forming anvil blocks and dies.

Number of blows per min. Maximum stroke Output of electric motor

220 mm. 2.7 kW 1900 kg.

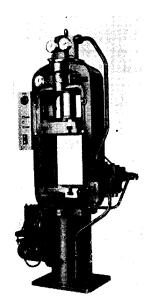
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06/015

#### 06/014 Fully Automatic Thermoplastic **Moulding Press**

intended for the injection of thermoplastics from the melting chamber into the closed mould. According to the position of the injection cylinder, the injection is either square to the mould closing line (into the center-line) or



06/014

vertical into the parting line of the pressmould (joint). The function of the press is automatic, semi-sutomatic or each operation is controlled by a hand lever.

Maximum weight of material for one injection 100 grammes 85 tons Maximum closing force Maximum withdrawing force Maximum opening force Maximum injection force Working pressure Maximum distance of 160 atm. platens Weight 810 mm. 3500 kg.

STROJEXPORT

8 tons

21 tons

#### 06/015

#### **Hydraulic Injection Moulding Press** CBA 160-1 for the treatment of thermosets

The press has a vertical frame. The clamping platens are guided by adjustable prismatic guides. The injection cylinder piston the maximum stroke of which is in line with the plane of the table, is located in the bottom of the frame. The distribution of the closing part is controlled by three push-buttons. By depresing the push-button of the closing piston the closing piston is set in operation and the other

movements of the press are automatically started. The operator has only to remove the moulding, clean the mould and pour in the material.

Adjustable closing force	
from	80 to 160 tons
Adjustable opening force	
from	32 to 75 tons
Maximum distance betwee	••
platens	1000 mm.
Adjustable injection	
(opening) force	from 0.5 to
	75 tons
Adjustable withdrawing	
injection force	from 0.2 to
	28 tons
Dimensions	229×128×
	$\times$ 341 cm.
Weight	3400 kg.
	STROJEXPORT

# 06/016 Hydraulic Injection Moulding Press CBS 45-1 for the treatment of thermosets

The press has a vertical frame. Its base is formed by a low-pressure accumulator which carries a pump with electric motor. The press is controlled by a two lever distributor whille the pump is operated by push-buttons. The moulding and injection force an be adjusted by means of relief valves.

Maximum closing force	45 tons
Maximum withdrawing for	ce 6 tons
Maximum injection force	12 tons
Stroke of closing piston	250 mm.
Stroke of injection piston	175 mm.
Maximum distance of	750 mm.
platens	400×360 mm.
Dimensions of moulds	1.1 kW
Output of electric motor	315 atm.
Working dressure	106×75×
Dimensions	×210 cm.
Weight	1120 kg.
	STROJEXPORT

#### 06/017 Thermoplast Hydraulic Press CSB 12.4.5-1

The smallest angle type press for semiautomatic injection of thermoplastics into the parting line - the mould. It is provided with a safety cell and automatic attachment.

Closing force	12 tons
Moulding force	4.5 tons
Maximum distance between	1 230 mm.
platens	$140 \times 220 \text{ mm}$ .
Dimensions of mould	150 atm.
Working pressure	55×82×
Dimensions	$\times$ 165 mm.
Weight	490 kg.
	STROJEXPORT

#### 06/018 PB 1600 Hammer

is a steam or air-pressure operated double-acting hammer for vertical forging. Its cast-steel anvil block is independently spring mounted and consists of two sections.

0110 0000101101	
Rated weight of	
vertically travelling	
parts	1600 kg.
Rated stroke	1120 mm.
Maximum working stroke	1060 m.
Maximum permissible	
power of blow	7500 kgm.
Number of blows per min.	50
Throat	1200 mm.
Weight 5	8,300 kg.

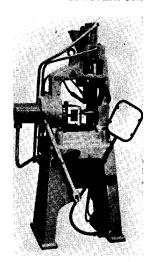
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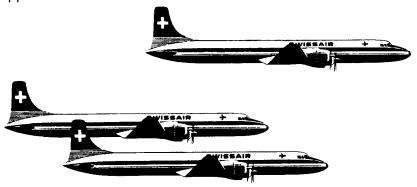
### **06/019-020** Pneumatic Hammers B 150 and B 630

are suitable for the most varied forging work, such as punching, cutting, upsetting, drawing and forging of sections. The pneumatic hammers are double acting two-cylinder machines with two rotary slide valves for the distribution of air above and below the ram.

Type	B 150	B 630	
Weight of ram	150	630 kg.	
Number of blows per			
min.	150	110	
Ram stroke	500	800 mm.	
Power of blow at			
maximum pressure in			
cylinder	716	2930 kgm./sec.	
Output of electric		55 kW	
motor	9.95		
Weight	7500	27,150 kg.	
	S	STROJEXPORT	,

06/017





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## **Visit**



DISPLAY
IN THE PAVILIONS:

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AND IN THE

A-II AND A-III
HALLS

#### 06/021 Hydraulic Forging Press CKV 1000

is a four-column. press with longitudinal feed to both sides and one cross feed, suitable for forging shafts and various parts of ingots up to 6 tons in weight as well as upsetting and punching ingots up to 1.7 ton in weight. The new special design of the press permits a high forging eccentricity.

Working force	980 tons
Working force of water	250 atm.
Stroke	1250 mm.
Clear height	2500 mm.

STROJEXPORT

#### 06/022 Straightening Press CDK 630

intended for straightening long forgings, bars and rolled stock. The long table of the former design has been substituted by a thrust plate in the base of the mobile press frame. The workpiece is carried in two stands (mobile and stationary) provided with pulleys, and can be rotated by means of electric motors.

Working force	600 tons
Maximum oil pressure	350 atm.
Stroke	400 mm.
Maximum travel of trame	6500 mm.
Radial pump drive	6.5 <b>kW</b>

STROJEXPORT

#### 06/023 Hand Operated Hydraulic Press LTH

intended for the pressing of arbors, mandrels, bushings, pins, bolts, etc., and for various stamping and forming operations in the manufacture of smaller parts. It replaces the LTR hand lever operated presses the operation of which has resulted in considerable physical strain.

Maximum hydraulic	
pressure of piston Direct piston pressure by	5000 kg.
hand lever	1250 kg.
Hand controlled piston	ū
stroke	245 mm.
Hydraulic piston stroke	80 mm.
Throat of piston	245 mm.
Maximum distance of	
platens	370 mm.
Minimum distance of	45 mm.
platens	180 kg.
Weight (welded frame)	180 kg.
(cast frame)	270 kg.
	STROJEXPORT

#### 06/024

## Automatic Coil Spring Machine Au 1

intended for the manufacture of steel coil springs, right-hand and left-hand, including pressure springs, pressure springs with ends pressed into a plane, pressure tension springs, single or double bevel springs, concave and convex springs and springs of other shapes, bowden cables and rings.

Maximum output: 180 springs per min. 240 rings per min.
Output of electric motor: 0.5 kW.

STROJEXPORT

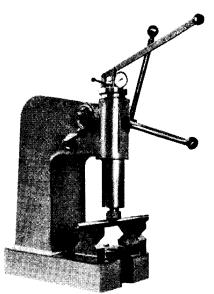
#### 06/025 Automatic Coil Spring Machine Au 3

intended for the manufacture of steel coil springs, right-hand and left-hand, including pressure springs, pressure springs with ends pressed into a plane, pressure tension springs, single or double bevel springs, concave and convex springs and springs of other shapes, bowden cables and rings.

Maximum output: 98 springs per min. 130 rings per min. Output of electric motor: 2.2 kW.

STROJEXPORT

06/023



### **Automatic Coil Spring Machine** Au 8

intended for the manufacture of coil springs, right-hand and left-hand, including pressure springs, pressure springs with ends pressed into a plane, pressure tension springs, single or double bevel springs, concave and convex springs and springs of the other shapes.

Maximum output per min. Output of electric motor

STROJEXPORT

#### 06/028 Guillotine Shears NTH 200/20

for cutting sheets into small sizes for further treatment. When cutting strips, 650 mm. wide, stops can be used. With the stands disengaged, longer sheets or strips can be cut as compared with the length of cut, but only to a width of strip of 600 mm.

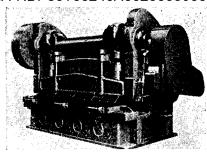
Maximum length of cut Maximum sheet thickness (50 kg./sq. mm. in tensile strength):

Cutting angle of 5° Cutting angle of 4° Cutting angle of 3° Output of electric motor

2000 mm. 20 mm.

18 mm. 16 mm. 24 kW.

STROJEXPORT



06/028

#### 06/029 Press Brake OL 200

intended for simple as well as complex bending operations. The machine can also be used as a multi-operation press or shears.

Maximum working pressure Maximum working length Maximum thickness of bent sheet Throat
Output of electric motor
Weight

200 tons 4250 mm. 12 mm. 305 mm 15 kW 21,000 kg.

STROJEXPORT

#### 06/030 Forging Line

The forging line consits of: KU 250 roller, LKM 1600 and LKO 315 forging STROJEXPORT presses.

The periodical

### CZECHOSLOVAK FOREIGN TRADE

supplies information on the export products of all the sectors of the Czechoslovak industry. Reports on fairs and exhibitions, reports on trade policy and foreign press comments, supplement the contents of the richly illustrated periodical, issued six times annually in English, German, Russian, Spanish, Portuguese and French.

#### 07 MACHINE TOOLS

#### 07/001 Watchmakers' Fine Engineering Lathe "LAMA II"

designed for various fine engineering jobs in collet-chucks up to 8 mm. in dia. STROJEXPORT

#### 07/002 Universal Centre Lathe SN 40

for single part and multiple part production. The end of the spindle has a short taper with bayonet-joint. The lathe cuts all usual metric and Whitworth threads without change gears. After changing gears, module and diametral pitch threads are also obtained.

Swing over bed: 400 mm.
Distance between centres: 150, 1000, 1500 mm.
Number of spindle speeds: 0utput of electric motor: 4.4 kW
Weight: 1650 kg.

STROJEXPORT

#### 07/003 Universal Lathe SV 18 R

with KZ 15 hydraulic copying attachment, suitable for highly accurate finishing operations in single part and small series production.

Swing over bed: 380 mm.
Swing over carriage: 60 mm.
Speed range: 14 - 2800 r. p. m.
Distance between centres: 1000 mm.
Input: 6 kW

STROJEXPORT

## **07/004**Lathe SS 35

with IZS 200 thread cutting attachment. The gears are changed from the operator's post. The thread cutting attachment forms an independent unit.

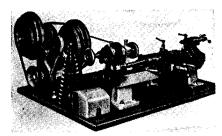
Turning length: 1000 mm.
Speed range: 112 to 2240 r. p. m.

Output of the motor for spindle drive: 14 kW

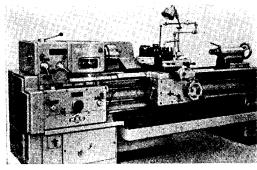
Pitch of external threads: M6×0.75−
- M240×6;

Pitch of internal threads: M30×1−
- M250×6.

STROJEXPORT



07/001



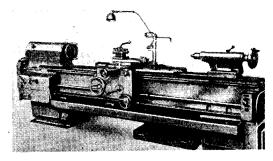
07/002

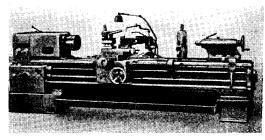
#### **07/005** Centre Lathe SS 50 K

Automatic working cycle. The machine is designed for the quantity production of medium sized parts. It is provided with IKS 2 hydraulic copying attachment and hydraulic tailstock.

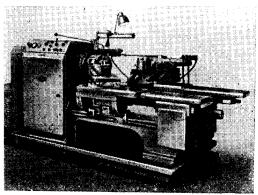
Swing over bed: 500 mm.
Swing over carriage: 250 mm.
Distance between centres: 750 to 2000 mm.
Spindle speed range: 22.4 to 2240 r.p.m.
Output of electric motors: 22 kW

STROJEXPORT

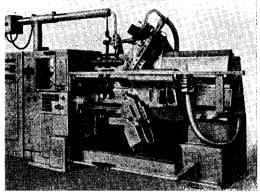




07/006



07/008



07/009

## **07/009**Automatic Repetition Lathe SP 31

The machine serves for machining of parts of intricate shape according to pattern by means of the hydraulic attachment and indexing card.

#### 07/006 Universal Centre Lathes SN 55 to SN 71

suitable for single part and small series production. The machine is designed for medium outputs and for cutting metric, Whitworth, module and diametral pitch threads.

	SN 55 SN 63
	SN 71
Swing over bed:	550 630
5	710 mm.
Swing in bed gap:	800 880
3 3.	960 mm.
Speed range:	10 to
. 0	1000 r.p.m.
	STROJEXPORT

#### 07/007 Centre Lathe SU63A

intended for single part or multiple part production up to 6000 kg. in weight. It can be provided with IKS 3 longitudinal or cross feed hydraulic copying attachment for the production of formed parts. The guide surfaces of the bed are protected by hardened gibs.

Swing over bed:	630 mm.
Distance between centres:	2750 mm.
Swing over carriage:	360 mm.
Number of longitudinal as	nd
cross feeds:	40
Output of electric motor:	17/10 kW
	STROJEXPORT

#### 07/008 Semi-Automatic Lathe SPE 50

The machine is intended for machining medium sized parts in quantity and multiple part production. Both external and internal surfaces of the chucked workpiece can be simultaneously machined by means of the two carriages. The machine can also be adapted to hydraulic copying attachment.

Swing over bed:	500 mm.
Turning length:	300 mm.
Number of spindle speeds:	12
Speed range:	54, 67, 83, 100,
-	133, 166, 207, 238,
	272 332, 408, 512.
	STROJEXPORT

Maximum swing over bed:	315 mm.
Maximum turning length:	1000 mm.
Speed:	71 to
Maximum input of spindle:	1800 r. p. m. 30 kW

STROJEXPORT

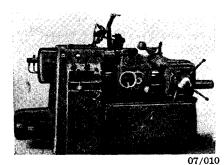
#### 07/010 Capstan Lathe R 25

The machine is intended for the production of parts from bar stock or chucked. Preselection of spindle speeds.

Swing over bed:
Swing over cross slide
rest:
Spindle bore:
Spindle speed range:
Output of electric motor:

315 cm.
160 mm.
36 mm.
18 to
3150 r. p. m.
5.5 kW

STROJEXPORT

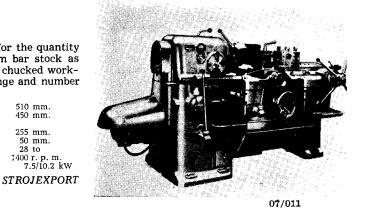


## **07/011**Capstan Lathe R 5

The machine is suitable for the quantity production of parts from bar stock as well as for medium sized chucked workpieces. It has a wide range and number of speeds and feeds.

Swing over bed:
Swing over bed slide:
Swing over cross slide
rest:
Bar capacity:
Spindle speed range:
Cutput of electric motor:

510 mm.
450 mm.
550 mm.
50 mm.
28 to
1400 r. p. m.
7.5/10.2 kW



## 07/012 Double Column Vertical Turning and Boring Mill SK 12

intended for the machining of short and heavy workpieces up to 4 tons in weight.

 Maximum swing over bed:
 1350 mm.

 Maximum height of workpiece:
 1000 mm.

 Speed ranges:
 150 r. p. m.

 P1
 3.55 to
 150 r. p. m.

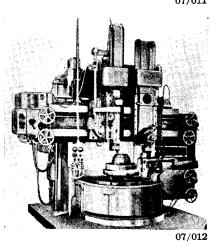
 P2
 5.3 to
 225 r. p. m.

 P3
 7.45 to
 314 r. p. m.

 Maximum output of electric motor:
 37 kW

# 07/013 Automatic Die-Sinking Machine FkO8c with Electric Tracer Control

The machine produces complicated and irregular shapes of dies, moulds, metal patterns, templates and cams by three-dimensional copying from patterns.



Working surface of table: Number of spindle speeds in each range, in either direction of rotation: Input of electric motor:

 $2\times700$  mm.

8 7 kw STROJEXPORT

#### 07/014 Automatic Five-Spindle Lathe AN 35

designed for quantity production of parts from bar stock, such as pins, bushings, etc. It is also suitable for hole drilling and thread cutting if equipped with respective attachments.

with respective attachments.

Maximum diameter of bar stock:

stock:

Maximum length of machining:

Speed of electric motor:

Output of electric motor:

Speed of electric mot



The machine is intended for machining heavy workpieces up to 40 tons in weight, turning inner and outer tapers as well as for screwcutting operations. Electromagnetic copying attachment is supplied as special accessory.

Supplied as special accessory.

Maximum diameter of turning by means of side arm:

Maximum diameter of turning by means of tool arm:

Maximum turning height:
Spindle speed range:

Input:

4200 mm.
2500 mm.
2500 mm.
0.44 to 22.5 r. p. m.
145 kW

STROJEXPORT

#### 07/017 Single Spindle Automatic Lathe AD 25

with equipment, designed for the automatic quantity and series production of simple and intricate parts from bar stock, circular, hexagonal or square in cross-section, up to a maximum size of 25 mm. and turning length of 180 mm.

 Maximum/minimum spindle speed:
 3950/568 r. p. m.

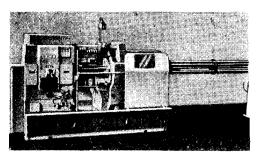
 Input:
 4.5 kW

 Approximate weight:
 1500 kg

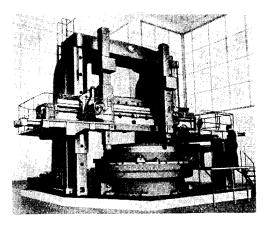
 STROJEXPORT

#### 07/018 Camless Automatic Lathe AB 80

The machine is intended for curveless turning from bar stock, and flanging operations. The easy setting of the machine without the use of cam discs enables parts to be made even in small series. Electro-hydraulic control of the working cycle.



07/014



07/015

Diameter of bar stock: 80 mm.

Maximum turning diameter (flanges): 240 mm.

Spindle speed range: 45 to 2000 r. p. m.

Output of electric motor: 12 kW.

Weight of the machine: 4500 kg.

STROJEXPORT

#### 07/019 Vertical Miller FVS 16

intended for machining small workpieces, 75 kg. in weight. The wide range of spondle speeds and table feeds enable carbide tipped tools to be used at high cutting speeds. Automatic cycle of the longitudinal table feed.

Clamping surface of table:
Longitudinal travel of table:
Vertical spindle feed:
Cross travel of headstock:
Spindle speed range:
Output of electric motor for spindle drive:

160×630 mm.
340 mm.
150 mm.
200 mm.
125 to
2000 r. p. m.
1.5 kW.

STROJEXPORT

#### 07/020 Knee Type Milling Machine FB 50 V

This vertical milling machine which is intended for very accurate and fine machining of intricate surfaces, enables carbide tipped tools to be used to the best advantage. The control of all gears is concentrated on a suspended pushbutton panel.

Working table: 500×2000 mm.
Speed range: 28 to
1400 r. p. m.
Feed range: 12 to
1200 mm./min.
Output of motor for electric drive: 27 to 41 H. P.
Weight: 57ROJEXPORT

#### 07/021 Knee Type Milling Machine FA 5 u

The machine is intended for economic milling of all kinds of material by means of high speed or carbide tipped cutting tools. Equipment for uniform milling and automatic working cycle of the longitudinal table.

Dimensions of table: 400×2000 mm.

Speed range: 18 to 1400 r. p. m.

STROJEXPORT

#### 07/022 Milling Machine FRE 03

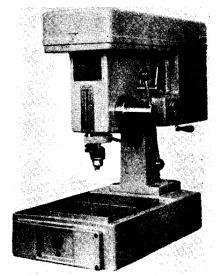
This unit head milling machine is intended for the machining of plane surfaces, with a high accuracy in both single part and multiple part production. The operation of the machine is concentrated in one place. The feed of the table is infinitely variable.

Working area of table: 800×2000 mm.
Feed of table: Spindle speed range: 28 to 900 r. p. m.
Distance between spindles: 250-850 mm.
Output: 28 kW.

STROJEXPORT

#### 07/023 Vertical Milling Machine FV 1000

intended for the machining of heavy and complex workpieces in single part and multiple part production.



Width and length of table: 1000×3150 mm.

Maximum height of workpiece: 1000 mm.

Longitudinal travel of table: 2800 mm.

Vertical travel of headstock: 600 mm.

Cross feed of slide: 1100 mm.

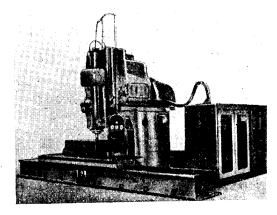
Weight: 22,000 kg.

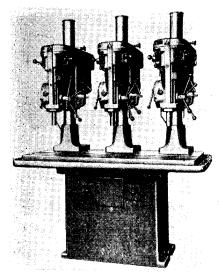
STROJEXPORT

## **07/025**Bench Drill V 10 A

A medium type drill of a complete line of drilling machines. Wide speed range. Vertically adjustable headstock. Own cooling pump. Own illumination.

STROJEXPORT 07/0**23** 





07/026

#### **07/026** Upright Drill V20/3

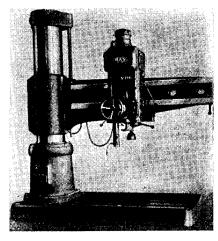
Three spindles.

Drilling diameter: Working surface of base plate:

20 mm.

1400×450/3 mm.

STROJEXPORT



07/027

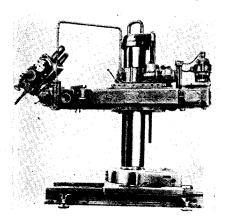
#### 07/027 Radial Drill VR 6

Used for drilling holes and screw cutting in large workpieces of intricate shapes. Suitable for both single and multiple part production.

Maximum diameter in drilling holes in steel of Spindle stroke: Spindle speed: 14
Number speed range: 16 to 1400 r.p.m.
Higher speed range: 20 to 1800 r.p.m.
Floor space required: 5900×3750 mm.
6400 kg.

STROJEXPORT

07/028



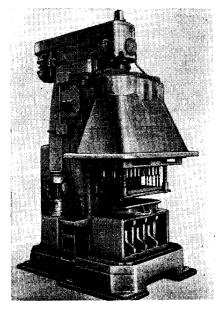
#### 07/028 Rotary Drill VRM 50

Intended for drilling, turning and trueing holes and cutting threads in large workpieces in all directions. Especially suitable for use in mechanical workshops and assembling shops for the manufracture of bridges, boilers as well as in shipyards.

Drilling depth:

Spindle speed range in either direction:

Spindle feeds:
STROJEXPORT



07/029

## **07/029**Multi-spindle Drilling Machine VM 8

Intended for drilling, counterboring, reaming and sutting threads in single as well as in multiple part production.

Number of spindles: 36
Maximum diameter of drill 20 mm.
Spindle speed range: 63 to 500
(125 to 1000)
r.p.m.

r.p.m.
Size of drilled surface: r.p.m.
1200×630 mm.
STROJEXPORT

#### 07/030 Horizontal Boring Machine H 63A

Used for precision drilling, boring, milling, thread cutting, reaming and facin of various parts.

Diameter of work spindle: 63 mm. Maximum diameter in boring with work spindle: 355 mm. in turning with tool slide: 560 mm. Maximum drilling depth with one feed:  $800\times1000$  mm. Clamping surface of table: 8 to 1400 spindle speed range: r.p.m. Output of electric motor: 4 kW. STROJEXPORT

#### 07/031 Universal Grinder BUA 31

intended for grinding external cylindrical and tapered surfaces as well as holes and planes with swivelled wheel head by 90°. Suitable for longitudinal and recess grinding with automatic wheel head travel. The machine is also suitable for use with the contact diameter meter.

Swing over table: 315 mm.
Distance between centres: 1000 mm.
Longitudinal travel of table: 1250 mm.
Cross travel of wheel head: 170 mm.
Wheel head motor: 7.5 kW.

STROJEXFORT

#### 07/033 Horizontal Surface Grinder BRH 25

The machine is suitable for grinding of plane surfaces in both single part and multiple part production. The drive of the machine is hydraulic, and all movements of the machine are hand or automatically controlled. The grinding wheel is of rigid design.

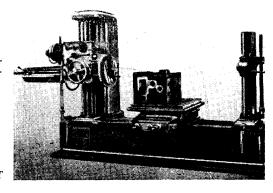
Clamping surface of table:
Maximum grinding width:
Maximum grinding length:
Longitudinal travel of
table:
Cross travel of wheel head:
Output of wheel head

250×800 mm. 250 mm. 800 mm.

1000 mm. 310 mm. 2.4 kW.

STROJEXPORT

07/030



07/038

#### 07/035 Lathe Tool Grinder BBT 350

intended for cutting the cutting surfaces of cemented carbide tipped tools. Dimensions of grinding wheels:

External diameter:	350 mm.
Internal diameter:	270 mm.
Width:	100 or 70 mm
Speed of grinding wheel:	1560 r. p. m.
Size of tables:	210×560 mm.
Hand adjustment of tables:	95 mm.
Maximum angle of tilt of	
tables:	<b>+</b> 15.
Electric motor:	
Speed:	1420 r. p. m.
Output:	2 H.P.
Weight:	820 kg.
	ozo ng.

## Crankshaft Grinder BKU 63

intended for grinding main and big end journals of crankshafts. Also suitable for grinding crankshafts. This machine finds use especially in repair shops.

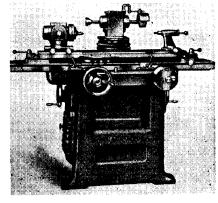
Grinding diameter:		mm.
Distance between chucks:	2000	mm.
Distance between centres:	2330	mm.
Maximum eccentricity of		
pins:	140	mm.
Output of electric motor		
of grinding wheel head:	8	kW

STROJEXPORT

#### 07/036 Universal Tool Grinder BN 102

The machine is intended for sharpening cutting tools, such as cylindrical and tapered reamers, end side milling cutters with straight or helical cutting edges, recessed milling cutters, taps and countersinks. It is also suitable for grinding internal and external cylindrical and horizontal surfaces.

Grinding diameter:	280	mm.
Distance between centres		
of wheel head and		
tailstock:	500	mm.
Vertical travel of wheel		
head:	230	mm.
Longitudinal travel of		
table by hand:	440	mm.
table by hand: Cross travel of table:	240	mm.



07/036

07/037

STROJEXPORT

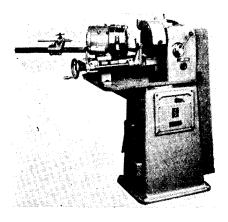
STROJEXPORT

#### 07/037 Twist Drill Grinding Machine BNV 75

for cutting the cutting edges of twist drills.

Minimum diameter of	
twist drill:	6 mm.
Maximum diameter:	75 mm.
Minimum apex of drill:	800
Maximum apex:	1600
Swing in rest:	90 mm.
Output of electric motor-	0.75 kW

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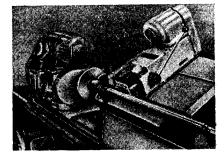


#### 07/039 Machine for Superfinishing Cylindrical Surfaces IDSV 3

The machine is designed for single part production or in small series. It finds use especially in the machine tool industry and is also suitable for the production of rolling mill rollers and the machining of functional surfaces of slide bearings and accurate and highly stressed shafts. The attachment can be mounted on the carriage of a lathe or on the plain grinding machine.

Working pressure: 10 to 80 kg.
Cross feed of quill: 20 mm.
Clamping surface: 120×360 mm.
Output of electric motor: 0.3 kW

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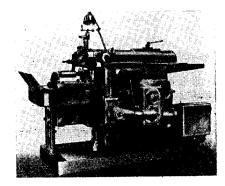
07/039

#### 07/042 Shaping Machine HO 40

The machine is intended for shaping workpieces up to 300 kg. in weight in single part and small series production. It is also available with hydraulic copying attachment.

Maximum shaping length: 400 mm.
Clamping surface of table: 400 mm.
Maximum pulling power: 650 kg.
Output of electric motor: 3 kW

STROJEXPORT

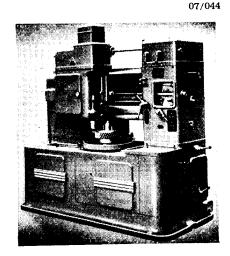


07/042

#### **07/044** Gear Shaper OH 6

The machine is suitable for the production of internal and external spur, helical and herringbone gears, gear segments, gear tooth type clutches, ratchets, cams, polygon and other shaped holes, etc. The working cycle of the machine is semi-automatic.

	Internal External Gears	
Maximum diameter of		
spur gears	500	500 mm.
Minimum diameter of spur gears	50	50 mm.
Maximum diameter of		
gears	90	90 mm.
Maximum module	6 mm.	
Number of strokes per min.	50 to 315	
Bore of table	75	
Output of main electric motor	3 kW	
	STROJ	<b>EXPORT</b>

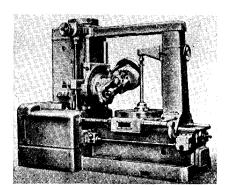


#### 07/045

#### Gear Hobbing Machine OF 10

The machine is intended for the production of spur, helical and worm gears. Special attachments enable the worm gears to be cut by the individual indexing method by means of a side milling cutter, or by the tangential method by means of a hobbing cutter.

Maximum module: Diameter of work table: 10 mm. 850 mm. 20 to Hob spindle speed range: Number of longitudinal feeds of work table: Longitudinal feeds per one 125 r. p. m. 36 table revolution: 0.05 to 1.5 mm. Number of vertical feeds of hob slide: Vertical feeds per one table revolution: Output of main electric 0.2 to 6 mm. motor: 7.5 kW STROJEXPORT



07/045

gearbox cover. The machine is foursided. The vertical drilling unit carries a six-spindle drilling bar head. The clamping of workpieces is pneumatic.

Output: 40 pieces per hour.

The machine is designed for machining

the engine body and exhaust cover.

Fine Boring Machine B2

Hydraulic clamping.

Number of headstocks: Number of clamps: STROJEXPORT

30 pieces per hour.

STROJEXPORT

#### 07/047

#### Automatic Lathe ANK 90

for squaring the ends and machining the holes of conveyor bearing tubes. The working cycle is automatic, and the operator merely inserts the tubes into the magazine. The working cycle is controlled by electric relays and electromagnetic valves. The tubes are fed and clamped pneumatically.

Maximum diameter of tube:
Minimum diameter of tube:
Maximum length of tube:
Minimum length of tube:
Speed of work spindle:
Output of motor of the drilling unit:
Weight:
90 mm.
850 mm.
815 r.p.m.
315 r.p.m.
3 kW
2100 kg.

3 kW

## 07/051

Output:

07/050

#### Automatic Production Line LX 1 for the machining of connecting rods

The feeds of plates with clamps, the feed of work units and the accurate adjustment and clamping of plates are hydraulic. These movements are hydraulically interconnected so that no movement can be started before the preceding one has been completed. The electric controls are concentrated on the control desk. By means of pushbuttons, located on this desk, the various functions of the machine can be switched on or off during operation. By means of a safety switch the whole line can be promptly disengaged. The motors are provided with a signalling equipment. Two operators are required for the control of this line.

STROJEXPORT

### **07/048**Unit Head Machine 77073

for the machining of front wheel hubs. It drills, roughens, chamfers and cuts threads. The clamps for hand clamping are on a revolving drum. The positioning and revolving of the drum is hydraulic, the working cycle is automatic.

Output:

85 pieces per hour.

STROJEXPORT

STROJEXPORT

## **07/049**Unit Head Machine 77077

used for the machining of the rear

#### 07/053 Ultrasonic Drilling Machine UzV 1-20

The machine is intended for the manufacture of small dies, drawing dies, irregular holes and recesses and punching holes in hard and brittle materials (metals or other materials), such as glass, germanium, ceramic materials, sapphire or diamonds.

Approximate input: Accuracy: Operating speed: 2100 W. 10-3 mm. 350 cu.mm. (glass), 20 cu.mm. (SK metal).

STROJEXPORT

#### 07/055 Electric Spark Micro-Perforator VJ 03

intended for making holes, 0.05 to 0.8 mm. in diameter, in hard and tough materials and cemented carbides.

Diameter of table: Maximum input: 100 mm. 0.4 kVA.

STROJEXPORT

## 07/057 Electric Spark Erosion Die Cutter VJK 2

used for the manufacture of medium and large size moulding tools of cemented carbides and tool steels.

Maximum machined surface: Automatic spindle stroke: Maximum dimensions of workpiece:

10,000 sq.mm. 250 mm.

350×300×250 mm.

STROJEXPORT

07/055

07/053

#### 07/058 Electric Spark Thread Cutter ZJ 1

used for making threads in holes of cemented carbides and hardened steel tools.

Working range: Five machining steps with automatic process regulation. M2 to M14.

STROJEXPORT

#### 07/059 Small Ultrazonic Perforator VU 3

used for machining of hard and tough materials, such as ceramics, precious and semi-precious stones, cemented carbides and the manufacture of fine tools, various shaped tools and cavities of the hardest conductive or non-conductive materials.

STROJEXPORT

#### **07/060**

#### Anode-Mechanical Electric Spark Erosion Saw for Small Sections PA 30

The machine is used for cutting of hard and tough materials, cemented carbides and special alloys, about 30 mm. in diameter.

Maximum diameter of cutting disc: Output:

300 mm. 2 kW

STROJEXPORT

## 07/061 Electric Spark Inscribing Needle IJV 3

used for making inscriptions in metal objects. The needle leaves a permanent mark. Approximate output: 0.5 metre per min. STROJEXPORT

#### 07/063 Hardening Machine EKS 30

The machine is a universal semi-automatic machine for the surface hardening of small parts up to 20 kg. in weight, used both in single part and multiple part production.

Maximum diameter of hardened part: Length:

300 mm. 600 mm. 0.75 kW

STROJEXPORT

#### 07/064

Input:

#### H. F. Induction Generator GV 21

The machine serves for direct heating or it finds use with other appliances, such as hardening machines, etc.

Maximum permanent H. F.

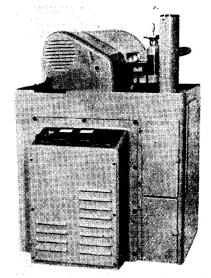
output: Input at a ful load: Frequency: Output voltage:

75 kW 450 kc/s 5 kVef.

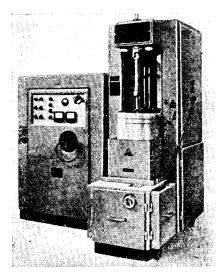
STROJEXPORT

#### 07/068 Abrasives:

Corundum, CARBORUNDUM, ELECTRITE A, ELECTRITE 99, ELCARBO grinding wheels. Porous cutting and dressed wheels. Grinding stones and files,



07/060



07/063

segments, abrasive cloths and papers. Dental grinding wheels. Ceramic plates for machining metals. CERAMICS

#### 08 FINISHING EQUIPMENT

#### 08/001

#### Magnetic Thickness-Gauge

Intended for measuring the thickness of surface coatings on ferromagnetic bases. Measuring ranges: MT 1: 100 to 500 microns with a mean quadratic deviation of  $\pm$  10 p. c. MT 2: to 100 microns with a mean quadratic deviation of  $\pm$  10 p. c. Novelty: Limit magnetic thickness-gauge for rapid measuring 'in quantity production. Measuring range: adjustable from 10 to 500 microns.

#### 08/002

#### Automatic Viscosity Regulator and Recorder for Paints and Similar Liquids

It measures, registers and maintains viscosity at the required value. Viscosity is determined by remote measuring the length of the ball in a tube. Measuring range: 10 to 2000 est or above, according to the diameter of the ball.

#### 08/003

#### Pilot Plant Station for the Neutralization of Acid Waste from Pickling and Electroplating Plants

The method consists in adding continuously lime milk to the acid waste and filtering the acid waste after neutralization and coagulation of metal salts. Output: 8 cu. metres per hour.

#### 08/004

#### Automatic Dipping Plant for Electrical Resistors, Type LAO 153

used for coating resistors by dipping (values 1 W,  $^{1}/_{2}$  W,  $^{1}/_{4}$  W). The resistors are inserted into the machine in a magazine. Dimensions of the box:  $4500 \times 1100 \times 2300$  mm. Capacity: 12,500,000 resistors in 200 working shifts.

#### 08/005

## **Sherardizing Process Using Zinc Ashes**

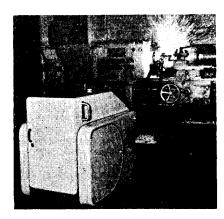
The process consists in coating steel or cast-iron parts with zinc. The ferro-



08/001

zinc alloy, produced on the surface, protects the parts against corrosion and water. It is especially suitable for screws, nuts and small parts. The service life of the coating is 10 to 15 years without maintenance being required. Output per 24 hours: 3 tons of small parts (such as M 12 nuts). 1 sq. metre of coating = 20 kg of M 12 nuts. Costs of 1 sq. metre of coating: 7.— Cz. Cr.

08/006



#### 08/006

## Electrometallizing Semi-Automatic Gun, Type EMP/2/57

with electrode arc melting, designed for spraying steel, aluminium, brass, bronze and other alloys. Diameter of metallizing wire (electrode): 2.5 to 3 mm. Output of steel: about 40 kg per hour. Weight: 150 kg.

#### 08/007 Metallizing Gun, Type AD1

intended for spraying worn parts with all metals.

#### 08/008

## Airless Spraying Equipment for Electrostatic Fields

By means of this equipment, workpieces, suspended on the conveyor, are sprayed with paints. As compared with handspraying, an economy of about 50 p. c. is obtained. Several spraying units can be located in the booth Minimum speed of conveyor: 1.5 metre per min. Input 5 kW, voltage 70 to 150 kV. Quantity of sprayed paint through one nozzle: 0.03 to 0.06 litre per min.

#### 08/009

#### Chromium Diffusion Plant for the Treatment of Steel Components Designed to Substitute Brass

The chromium plated surface resists corrosion and heat up to 1000 °C. Low-carbon steels are used to replace brass. Output of the VÚOM plant: 500 kg of small parts (M 12 nuts) per 24 hours.

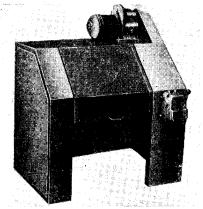
#### 08/010

#### Bright Galvanizing Plant with Automatic Control of Current Density

After cathode-anode degreasing follows acid copper- and nickel-plating with bright decorative chromium plating. Novel are bright acid copperplating and automatic control of current density by means of d. c. sets with new regulators. The output is 200 up to 400 p. c. higher as compared with that of the old baths.

#### 08/011 Cement Hand Grinder

The grinder has three planetary ceramic tools (e. g. grinding, polishing and cleaning wheels). It is easy to control, light and suitable for grinding cements, polishing paints and cleaning plane or slightly curved surfaces. Output: 3.0 cu. metres per min. Weight: 1.50 kg.



08/012

#### 08/012

#### **Barrel Finishing Equipment**

designed for polishing and finishing large quantities of various small parts. It consits of four barrels (barrel working space of  $400\times400$  to  $500\times600$  mm in dia.), a few magazines for finishing preparations, a separator for the separation of finished goods, and the finishing preparation.

08/010





# FOREIGN TRADE CORPORATION FOR THE EXPORT OF AND IMPORT METALLURGICAL PRODUCTS

Opietalova 27, PRAHA 3 - CZECHOSLOVAKIA

Telegrams: Ferromet Praha
Telephone: 22 12 00
Telex: 211 Ferromet Praha

ROLLED AND DRAWN STEEL

TUBES AND TUBE PRODUCTS

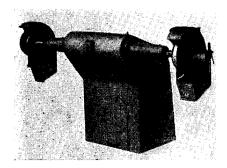
WIRE AND WIRE PRODUCTS

STEEL FORGINGS, PRESSED WORK PIECES,
STEEL CASTINGS AND FINISHED PRODUCTS

POLDI HIGH - GRADE STEELS

CEMENTED CARBIDES POLDI DIADUR





08/013

#### 08/013

#### Universal Belt Polishing Machine, Type ULS

suitable for grinding or polishing operations for all workshops where the speed has to be changed. The machine has two spindles. Ranges: 1580, 1780, 2000 or 2300 r. p. m.

#### Belt Polishing and Grinding Machine, Type LSP 630 D

The machine has two spindles for manual grinding and polishing or belt grinding. Each spindle is provided with its own electric motor. Ranges: 1380, 1560, 1705 or 2000 r. p. m.

#### 08/014

#### Bell Plating Machine, Type ZAP

The machine is used for plating small metal parts. Bell plating capacity: 25 or 50 litres. By replacing the bell and immersion cathode, the ZAP 25 type can be easily converted into the ZAP 50 type and vice-versa. As compared with machines of older type, half the time is required.

#### 08/015

#### **Barrel Plating Machine**

The machine which is suitable for the plating of a large quantity of small metal parts, consists of two tanks. One tank contains the plating bath while the parts are rinsed with water in the other tank. The perforated plating barrel moves from one tank to the other by means of a rotary arm which derives its movement from the hydraulic cylinders between the tanks.

#### 08/016 Hot-Dip Plastic Coating

The pulverised plastic material (polyamide, polyethylene) is whirled up by compressed air in the tank into which the sprayed and preheated part is dipped. The fused powder forms a nonporous firm coating which resists corrosion, wear and breakdown voltage. The part is coated within 6 to 10 seconds; thickness of the coating: 0.4 to 1 mm.

#### 08/021

#### Air-Cooled Polishing Wheels

used for polishing parts made of metal or plastics which must not be excessively heated. The wheels can be wound of any fabric.

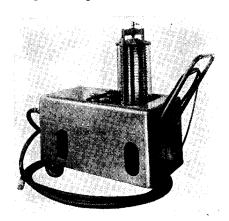
08/014



08/023

#### 08/022 Liquid Abrasive Honing Plant

The part is honed and sprayed with a mixture of the abrasive, water, wetting agents and inhibitor by means of compressed air. The parts are fed mechanically under the nozzle. Output: 8 sq. metres per hour.



08/023 Filtering Apparatus

used for filtering all galvanising baths, the chromium bath excepted. It is especially suitable for filtering bright galvanizing baths.

08/024 Anode Holders

08/026 Vapour Degreasing Machine, Type 20/6

The machine degreases various parts in chlorated hydro-carbon vapours (perchlorethylene, trichlorethylene). All kinds of grease, oil, resin, pitch, tar, paraffin, sulphur, etc. are easily dissolved in the vapours.

**08/027**Tank Degreasing Machine, Type VOS - 0,2 - E

The machine which degreases parts of various dimensions, is especially suit-

able for repairs of machines and vehicles.

08/029 Pressure Tanks

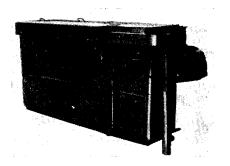
#### 08/030 Spray Guns

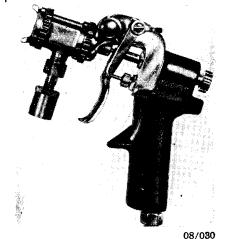
designed for spraying parts of all shapes with paints and cements; KF 1 litre with bottom tank. KF 1/2 litre with bottom tank. KN 1/4 litre with upper tank. KN 1/2 litre with upper tank. KFT, connected to a 30 or 60 litre pressure tank. LT1 in five designs with tanks of various dimensions and connections (for spraying inaccessible parts or cavities, extensions are used which enable direct or side spraying). KFO spray guns for hot spraying, with air and paint heater (the paint is supplied from the pressure tank). DS 1 for spraying smaller surfaces (decorative spraying of porcelain, glass, earthenware, for stencil work, publicity and advertising purposes). VH 1 - exhaust guns, designed to remove small particles of impurities, dust, etc.

#### 08/031 Hardness Pendulum Tester

The hardness or progress of drying of the film of paint is ascertained by means of a 500 kg pendulum of a special shape.

08/026





#### 08/032

INSTRUMENTS

#### **Dynamic Corrosion Testing Device**

The device enables to follow up the corrosion of materials in flowing liquids or strongly aggressive media at temperatures up to 300 °C and a maximum pressure of 4 atm. Rate of flow: 70 litres per min.

### 08/033 Pneumatic Roughness Hammer

The hammer prepares surfaces prior to metallizing or coating, in places where they cannot be sprayed. It is also suitable for sectional surfaces, such as corners, rivet heads, etc. Output: 1 sq. metre per hour at an air consumption of 15 cu. metres per hour.

### PRECISION TOOLS AND MEASURING

#### 09/001

09

#### Precision measuring instruments Optical dividing head

for manufacturing of gears by means of the dividing method, and, in addition, for checking the accuracy of division.



#### Slide calipers

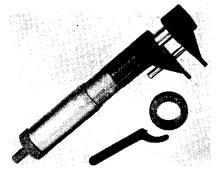
in various lengths for measuring ranges of from 140 up to 2000 mm, with an accuracy of  $1/10,\ 1/20$  and 1/50 mm.

#### **Micrometers**

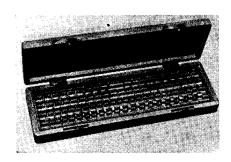
in many types and ranges including those for special purposes (for sheets, threads, etc.).

#### Gauge blocks

in three degrees of accuracy; used as basic elements for testing measurements. KOVO







#### "Microcator" measuring head

a high-sensitivity dial gauge for checking of extremely small differences. KOVO

#### Air gauge instrument

for checking of differences in the dimension to be measured in a considerably increased ratio; up to five secondary gauges can be connected to the principle instrument, thus enabling a number of various dimensions to be measured simultaneously.

KOVO

#### "Micropassameter"

a micrometer with a built-in dial gauge; connects the advantages of a micrometer and a snap gauge with those of a dial gauge.

KOVO



#### 09/051

#### 09/051 Cutting tools

spiral drills, reamers, roughing reamers, counterbores, cutters, metal slitting saws, lathe cutting tools, thread cutting tools.

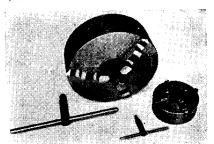
KOVO

#### M 4 Scraping gear

for machining of gear teeth as a substitute for costly finishing of gears by grinding.

KOVO





#### 09/071

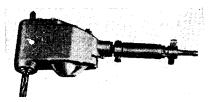
#### **Clamping tools**

universal lathe and drill chucks, vices, etc. KOVO

### "Perfector" electro-magnetic fixing apparatus

for drawing and checking workshop work.

KOVO



09/081

### 09/081 Air-operated tools

metal grinding machines, metal drilling machines, drilling hammers.

KOVO

#### 09/091

#### **Industrial stones**

from natural agate and synthetic sapphire.

#### **Hardness Testers**

for rapid hardness testing of metallic materials. KOVO

#### 09/101

#### Tapping attachment

in five sizes according to the thread to be cut; the magnitude of the cutting resistance is controlled by depressing the springs of the ball-coupling by means of a pressure ring which is fixed in the set position by means of a screw. For the operation of these attachments no special-type taps are required.

KOVO

#### 09/111

### Broaches with inserted tools (for key-profile)

(for key-profile). The fundamental part is formed by the broach body made from case hardering steel to which the drawing, guiding and working teeth are attached; a worm-out or damaged component can be exchanged by a spare one.

#### 09/121

### Continuous rolling of trapezoidal threads

A half of the screw is fitted with a thread by rolling between two discs which show the same profile of thread, however, with an angle of pitch different from that of the rolled thread; the discs are provided with cutting cones enabling the thread to be formed gradually.

KOVO

#### CZECHOSLOVAK ECONOMIC BULLETIN

informs commercial circles and persons interested in this line on the trade relations of the Czechoslovak Republic with all countries of the world and its building up. Published monthly by the Chamber of Commerce of Czechoslovakia.

10/001

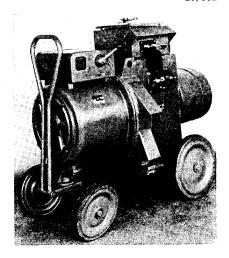
## 10 WELDING TECHNIQUE

#### 10/001

Triodyn K 320 Mobile Arc Welder

for welding of steel, cast iron and weldable non-ferrous metals from 0.8 mm thickness up to the thickest plates. It is provided with automatic switching off and is, therefore, particularly suitable for the building trade and assembly work. Rated motor output 14 kW, connection to mains 220, 380, 440 and 500 V, welding dynamo current range 30—320 Amp. Weight 320 kg.

STROJEXPORT



#### 10/002

#### K - 200 Mobile Arc Welder

for manual welding of steel, cast iron and weldable non-ferrous metals. Especially suitable for lighter duty. Mains connection 220, 380 or 500 V. Rated motor output approx. 9 kW.

STROJEXPORT

#### 10/003

### TR - 150 Portable Arc Welding Transformer

single-phase, without a fan, suitable for lighter duty. Connection to mains 380 V, on request can also be supplied for 190, 220, 440 or 500 V; rated input 9.4 kW, range of welding current 15 to 155 Amp, constant output 125 Amp. Weight 96 kg. STROJEXPORT

### **10/004 TR - 350 Mobile Arc Welding**

with a fan, suitable for medium and heavy welding duty. Connection to mains 380 V; on request also for 190, 220, 440 and 500 V, rated input 29.2 kW, range of welding current 50—430 Amp., rated welding current 350 Amp. Weight 196 kg. STROJEXPORT

#### 10/005

**Transformer** 

#### BS - 320 Petrol-Engine driven Arc Welder

with a petrol engine, suitable for welding of steel, cast iron and weldable non-ferrous metals from 0.8 mm thickness to the thickest plates. Provided with a Škoda 1201 egine, output 30 H. P., 3000 r. p. m., fuel consumption 225 g/H. P./h, water cooled, with a fan. Range of the welding current from 30—320 Amp. Weight 700 kg (compared to the existing Diesel set it weights 1000 kg. less).

STROJEXPORT

#### 10/006

#### T - 012 Argon - Arc Welder

portable, suitable for lighter indoor work, for welding of aluminium, conductors of smaller diameters. Connection to mains 220 V, range of the welding current 2.4—12.5 Amp. Weight 33 kg.

STROJEXPORT

#### 10/007

#### T - O32 Argon - Arc Welder

for welding of aluminium conductors, aluminium alloys, copper, brass, stainless steel, nickeline, manganese, etc. It welds wires up to a diameter of 7 mm, conductors up to approx. 35 mm, sheets of 1 mm thickness or thinner. Connection to mains 220 V, input 7 kW, range of the welding current 4—32 Amp. Weight 93 kg. STROJEXPORT

#### 10/008

#### KA - 320 Triodyn Mobile Arc Welder

with auxiliary equipment for welding of aluminium and other hard weldable non-ferrous metals in a zone shielded by a covering of argon gas. Output 14 kW, range of welding current 30 to 320 Amp.

STROJEXPORT

#### 10/009

#### T - 001 Portable Ionisator

for stabilization of the welding arc for welding of all kinds of material even for heavy duty. Connection to mains 220 V, max. welding current 500 Amp. Weight 20 kg.

STROJEXPORT

#### 10/010

#### TR - 260 Mobile Welding Transformer

one phase, equipped with a fan suitable for medium heavy welding work. Connection to mains: 380 V, on request also for 190, 220, 440 and 500 V; input 16.7 kW, range of welding current 30 to 260 Amp., rated weding current 210 Amp. Weight 135 kg.

STROJEXPORT

#### 10/011

#### Electronic Regulation Control for Miniature Spot Welder

enables synchronous switching on and off of the welding transformer and the regulation of welding output. Weight of the equipment including thyratrons approx. 40 kg. STROJEXPORT



10/011

#### 10/012 Electronic Regulation Control for Miniature Seam Welder

enables synchronous switching on and off of the welding transformer and the regulation of the welding output. Weight of the equipment including thyratrons approx. 40 kg.

STROJEXPORT

#### 10/013 KSI - 200 Output Stage

of high capacity, one phase a. c. electric regulator. It is necessary to connect to the KSI-200 Output Stage the controlling part which must be adjusted according to the type and characteristics of the relevant machine. Weight of the apparatus including ignitrons is approx. 50 kg.

STROJEXPORT

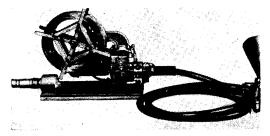
# 10/014 Electronic Regulation of EROS S 200 Seam Welder

enables to control alternating current of the welding transformer by means of two electronic valve-ignitrons in cross connection. STROJEXPORT

# 10/015 Electronic Regulation of EROS U 200 Resistance Welder

enables to control the alternating current of the welding transformer by means of two electronic valve-ignitrons in cross connection. These valves are controlled according to the method of welding or type of the welder by means of an electronic relay. The method of control can be chosen by means of a switch.

STROJEXPORT



10/016

#### 10/016 SPK - 600 Semi-automatic Welder

for submerged arc welding with automatic wire feed; the nozzle is moved in the direction of the weld manually. This welder is designed for welding of short or curved welds which could not be welded automatically. The diameter of the electrode wire is 1.6 and 2 mm, a. c. or d. c. welding current up to 650 A, contactor box supply voltage  $3\times380~V+0.50~c/s$  input of contactor's box without welding power source 500 VA. STROJEXPORT

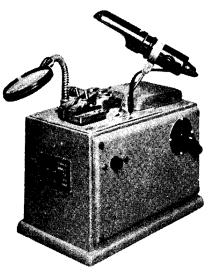
#### 10/017 VUSČA - 266 Universal Submerged Arc Welder

for welding of all types and positions of the weld. Diameter of the electrode wire 1.5, 3, 4 and 5 mm, a. c. or d. c. welding current, supply voltage  $3\times380\,\mathrm{V}$ . Weight without contactor box approx. 25 kg. STROJEXPORT

#### 10/018 BP Pneumatic Automatic Spot Welder

is supplanting several former types and is suitable for light work. Input 10 kVA, output  $2\times3.5$  mm (steel sheet).

STROJEXPORT



#### 10/022

#### 10/019 BK 60 Motor car Body High-speed Spot Welder

for body construction made of sheets of standard quality 0.8—1.2 mm. Electrode depth can be adjusted according to the size of the welded part by moving the upper arm and the extension of the lower arm. Throat depth 600 to 1200 mm, throat width 200—680 mm, primary voltage 380 V. Weight 1200 kg. STROJEXPORT

#### 10/020 KP - 60 Portable Gyroscopic Spot Welding

for mass production from clean sheets up to a thickness of 1.5 mm. Air pressure 5 atm., primary voltage 380 V.

STROJEXPORT

#### 10/021

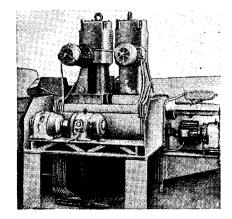
#### KP - 25 Suspended Spot Welding Gun

for welding of mass produced parts made of clean sheets up to thickness of 1.25 mm, air pressure 4 atm., primary voltage 380 V. STROJEXPORT

### 10/022 TAK - 1 Thin Wire Butt Welder

for welding of steel wires of a diameter from 0.5—1.5 mm. Opening of clamping jaws 3 mm, primary voltage 220 V, four step control of welding current. Weight 15 kg.

STROJEXPORT



10/023

#### 10/023

#### TAU - 80 Automatic Butt Welder

butt welding of cross sections up to 2500 sq. mm. Primary voltage 380 V. Weight 5200 kg. STROJEXPORT

#### 10/024

### **KPH - 20 Suspended Spot Welding Gun**

for the manufacture of motorcar bodies, railway wagons and for the building industry. It welds clean sheet of 1.25 mm single thickness, air pressure 5 atm., primary voltage 380 V.

STROJEXPORT

#### 10/025 TAK 8 P Mobile Automatic Butt Welder

for upset welding of steel, copper and aluminium wires. The welder is pneumatically controlled, the upsetting force is supplied by a spring which is tensioned automatically. Welding output steel wire 2—4 mm, primary voltage 220/380 V. Weight with the stand 96 kg.

STROJEXPORT

#### 10/026 RSO Micron Portable Oxygen Cutting Apparatus

for manual straight, circular and variously shaped cuts in material of a thickness from 3 to 80 mm. Electromotor 220 V, output 0.040 kW, 8000 r. p. m. Weight of the marhine without accessories 6.5 kg.

STROJEXPORT

#### 10/027

#### L 54 Miniature Uniform Pressure Oxy-acetylene Cylinder Welding Set

for jewellers, dentists and for welding of paper mill sieves or sheets up to 1 mm thickness; the set has 5 welding nozzles. Weight of the torch with handle 200 g. STROJEXPORT

#### T 2 Welding Torches

for preheating for heat welding, for flame straightening, local annealing, welding of steel from 30 to 100 mm thickness and for other similar shaping of metal by means of flame.

STROJEXPORT

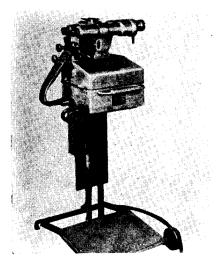
#### PB Welding Torches

for manual welding of non-ferrous metals, brazing, annealing, etc., by means of propane-butane-oxygen burning mixture. STROJEXPORT

#### 10/028

#### **ROV** Underwater Cutting Set

cuts by means of petrol oxygen flame steel parts and structures from 4 to 80



10/025

80 mm thickness under water up to a depth of 20 metres. STROJEXPORT

#### 10/029

#### PSA Dissous Gas and PSPB Propane Soldering Set

The set is designed for soldering or brazing by means of dissous gas and air or by propane butane air mixture. All torches operate with a pressure of the burning gas of 0 2 to 1.5 atm g.

STROJEXPORT

#### 10/030 Stop Valves

for opening and closing the flow of gas from steel cylinders.

#### **K8** Reduction Valve

is a single stage valve for reduction of oxygen pressure from steel cylinders or from high pressure pipe line sto a working pressure of 0—8 kg/sq. cm.

STROJEXPORT

#### VPK 250 Reduction Valve

for reduction of oxygen high pressure cylinder batteries to working pressure of the pipe lines of the industrial works central distribution system. ,

STROJEXPORT

#### VPK 630 Reduction Valve

for reduction of oxygen cylinder batteries or oxygen tank cars to pipe lines of the oxygen central distribution system.

STROJEXPORT

#### 10/030 RN 3 Cutting Extension

for manual oxygen cutting with the use of oxy-acetylene or oxy-propane-butane mixtures. STROJEXPORT

### RNK Circular Aperture Cutting Extension

for oxygen cutting of circular apertures of a diameter from 20 to 100 mm into steel parts.

STROJEXPORT

### RNN Cutting Extension for Rivet Heads

for manual cutting of rivet heads with a diameter of the shank from 10-30 mm.

STROJEXPORT

#### 10/030 R3 Cutting Torch

for manual oxygen cutting with oxyacetylene or oxy-propane-butane mixture. STROJEXPORT

#### RT 1 Manual Oxy-acetylene Injector Cutter

for heavy duty in foundries and for cutting scrap iron. STROJEXPORT

#### KK I - II Torches for Hardening

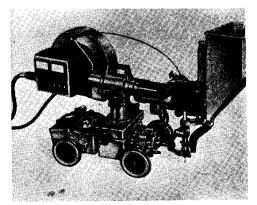
with a copper nozzle made of one piece. STROJEXPORT

#### 10/030 Multishaped Cutting Nozzles

are made in one piece of pure copper by a special cold shaping process. STROJEXPORT

#### 10/031 SUM 1000 Welding Tractor

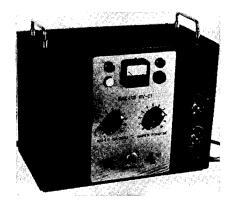
single arc welding tractor for submerged arc welding is of small weight with a simple control and a possibility



10/031

of continuous setting of the main welding variables. Diameter of the welding wire: 1.6, 2, 2.5, 3.15, 5 mm, a. c. or d. c. welding current up to 1000 A, supply voltage 200 V, 50 c/s, input without welding power sources 0.6 kVA. Weight of the tractor 42 kg.

STROJEXPORT

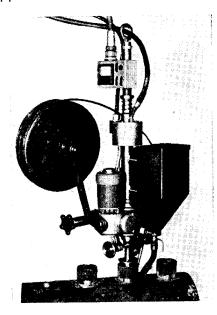


10/032

#### 10/032 RV - 01 Output Regulator

for equalizing of long term and sudden changes in the mains voltage during automatic submerged arc welding which would influence unfavorably the geometrical dimensions of the weld, if the power source of the welding current is a single phase welding transformer. Rated voltage 220 V, 50 c/s, input of the regulator 10 VA. Weight 8 kg.

STROJEXPORT



10/033

#### 10/033 SKN - 500 Automatic Welder for Welding of Boiler Chamber Sockets

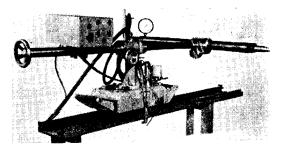
Can also be used in other cases if the conditions are about the same. Range of diameters of sockets from 30—110 mm, minimum diameter of the cylindrical preheating chambers 150 mm, electrode wire diameter 2 mm or 1.6 mm, d. c. or a. c. welding current up to 500 A. Weight of the welding head about 25 kg.

STROJEXPORT

#### 10/034

### SAP 400 Semi-automatic Aluminium and Stainless Steel Welder

for welding in an argon shield. The concumable electrode is fed automatically, the welding head is moved manually in the direction of the weld. Electrode diameter: 1.2, 1.6 and 2.5 mm, d. c. welding current up to 400 A, the speed of feed of the electrode is from 2—12 m/min., argon consumption of 14—18 litres/min.



10/035

#### 10/035 RNS 1000 Oxygen Cutting Machine

for oxy-acetylene cutting of low carbon steels, particularly in steel mills for cutting of risers, ingot heads and for cutting of large blocks for steel furnaces. Pressure of the cutting oxygen from 0.5 to 3 atm. g, speed of the carriage is continuously adjustable in the range of 1 to 18 m/h.

STROJEXPORT

#### 10/036 MB 2 Miniature Spot Welder

is an automatic welder of the table type for welding of thin sheets and wires. Primary voltage is 380—220 V if subjected to electronic synchronized control and 380—200—120 V when controlled by time relay. Weight 40 kg. STROJEXPORT

#### 10/037

#### Samples and Specimens of Welding Parts and Aids

(including smaller welding equipment).

STROJEXPORT

#### 10/038

A Model of BK 60 High-speed Spot Welder

STROJEXPORT

#### 10/039

A Model of Pneumatic Welding Gun with a built-in KP 2 Transformer

STROJEXPORT

#### 10/041

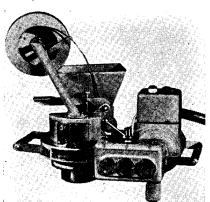
#### T 150 Argon Arc Welding Set

for manual arc welding of aluminium, magnesium and their alloys, non-ferrous metals, stainless steel, silicon steel, etc. Output 18 kVA. Weight 600 kg.

STROJEXPORT

#### 10/042 T 350 Argon Arc Welding Set

for manual arc welding of aluminium, magnesium and their alloys, non-ferrous metals, stainless steel, silicon steel, etc. Output 42 kVA. Weight approx. 800 kg. STROJEXPORT



#### 10/043 SRK 300 Automatic Summerged Arc Welder of Boiler Staybolts

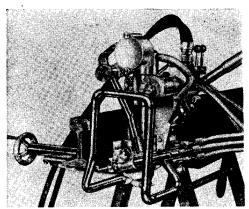
facilitates mechanical welding of boiler staybolts in the manufacture or repairs of fireboxes (for instance of locomotives). This automatic welder can also be used for other work if the conditions are about the same as with staybolts. Range of staybolts diameters from 17 to 32 mm, electrode dia. 2 mm, d. c. welding current approx. 280 A. Weight of the welding head 9 kg. STROJEXPORT

#### 10/044 Automatic Rail Oxygen Cutting Equipment

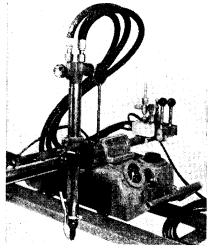
for rails of all known types up to the section height of 180 mm with the exception of grooved of rails. Cuts are suitable for connection of rails. Total sutting time, including clamping, is 2

minutes. Weight of the cutting machine without accessories is 20 kg.

STROJEXPORT



10/044



# 10/045 RŽR 300 Equipment for Oxygen Metal Powder Cutting

of steel alloys, cast iron, non-ferrous metals and after special adjustment, of low carbon steel sheets in bundles. It operates on the principle of oxygen cutting with the delivery of metal powders to the cutting zone by means of the oxy-acetylene flame. Maximal thickness of the material cut (stainless steel 18/8) by means of a smaller torch 300 mm, by means of a larger torch 500 mm.

#### 10/046 VUS TS 3600 Pressure Flame Hydraulic Welding Press

welds steel pipes up to 100 mm diameter and 8 mm wall thickness or round, "Roxor" reinforcement steel up to  $60\times60$  mm area, i. e. of 3600 sq./mm total welding diameter. Maximum welding pressure 15.000 kg. Time necessary for one weld 1-2 minutes. Compared to the present methods it increases the output 5 times.

STROJEXPORT

#### 10/047 VUS arg R 25 Aluminium Cutting Set

for inert gas arc cutting of aluminium. It cuts sheet aluminium of a thickness from 8 mm to 25 mm. Cutting speed from 54 to 300 metres/h.

STROJEXPORT

#### 10/048 VUS PH 30 Welding Gun for Welding of Pvc and Polyethylene

for manual welding of Pvc and Polyethylene plates of a thickness from 1 to

30 mm. Thickness of the filler material from 2–5 mm. Welding speed 7.5 m/h. Welding current 200–300 W.

STROJEXPORT

#### 10/049 VUS PL 10 Semi-automatic Flame Flange Welder

Welds steel of a thickness from 0.8 to 1 mm without filler metal, welding speed 16 m/h. This semi-automatic welder increases the speed in comparison with manual welding by approx. 30% and the quality of the weld is much better.

STROJEXPORT

#### 10/050 VUS arg Ms 3 Welder for Inert Gas Arc Welding of Brass Strips

Welds sheet brass of a thickness from 2—3 mm without filler metal. Welding speed 21—27 m/h. Welding current 160 to 350 A. The output as compared with manual welding increases up to 4 times and the weld is homogeneous.

STROJEXPORT

#### 11 OIL ENGINES

#### 11/001 Two-Stroke Air-Cooled SLAVIA Oil Engine 1D80

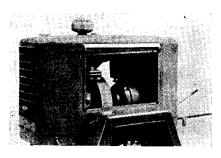
stationary, vertical with crankcase scavenging of 6.5 H. P. output and 2200 r. p. m. The engine can be started by hand or by electric power. Weight: 95 kg. It serves for driving, farming or building machines, generators, compressors, pumps or cable-ways.

STROJEXPORT

#### 11/002 Single-Cylinder Two-Stroke Water-Cooled SLAVIA Oil Engine 1D110

stationary, vertical with crankcase scavenging, of 16 H. P. output at 1800 r. p. m. The engine can be started by hand or by electric power. Weight: 195 kg. It is used for driving farming and building machines, generators, compressors, pumps, boats, etc.

STROJEXPORT



11/003

#### 11/003 Single-Cylinder Four-Stroke Air-Cooled Oil Engine 1ST120

stationary, vertical of 16 H. P. output at 1800 r. p. m. The engine can be started by hand or by electric power. Weight: 280 kg. It serves for driving farming and building machines, generators, compressors, pumps, etc.

STROJEXPORT

#### 11/004 Four-stroke water-cooled SLAVIA Oil Engine 18100K

A stationary 9 H. P. engine at 1500 r.p.m., with belt-pulley, clutch and bonnet. The forged shaft is carried in ball bearings. The engine can be started by hand or by electric power.

STROJEXPORT

#### 11/005-008 Low-Speed SLAVIA Oil Engines D5, D8, D12, D15

Stationary vertical four-stroke water-cooled engines.

	D5	D8	D12	D15
Output: H. P.	5	8	12	15
Speed: r. p. m.	900	800	700	650
Weight: kg.	270	360	500	700

They are used in agriculture, building trade and industry. STROJEXPORT

#### 11/009 SLAVIA Diesel Generating Set with an Output of 7.5 kW

A stationary four-stroke water-cooled SLAVIA 1 S 100 A engine (mobile type) with pressure lubrication and 9 H. P. output at 1500 r. p. m.

STROJEXPORT

#### 11/010 13.5 kW Diesel Generating Set

A stationary four-stroke water-cooled SLAVIA 2 S 100 A oil engine with pressure lubrication and 18 H. P. output at 1500 r. p. m., transportable type.

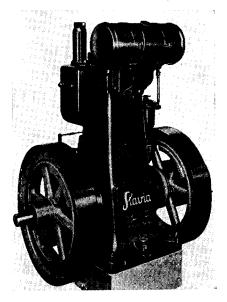
STROJEXPORT

#### 11/011 1 L 100 A SLAVIA Marine Oil Engine

A four-stroke water-cooled oil engine with pressure lubrication and 9 H. P. output at 1500 r. p. m. with adjustable propeller. It is suitable for driving small ships.

STROJEXPORT

11/005---008



#### 11/012 1L 110 ŠKODA Marine Oil Engine

A 15 H. P., 1500 r. p. m. four-stroke water-cooled oil engine with pressure lubrication, reversing and reduction gearbox, shaft guide and propeller, designed for driving small ships.

STROJEXPORT

#### 11/013 Mobile Diesel Generating Set with ŠKODA 2S 110 Engine

The four-stroke twin-cylinder 30 H. P., 1500 r. p. m. engine is provided with a belt-pulley, clutch, radiator on frame and bonnet. STROJEXPORT

#### 11/014 50 kVA ŠKODA Mobile Diesel Generating Set

The ŠKODA 4S 110 four-stroke twincylinder engine with bonnet, has an output of 60 H. P. at 1500 r. p. m.

STROJEXPORT

# 11/015 Marine Diesel Generating Set with SKODA 4L 110 Engine

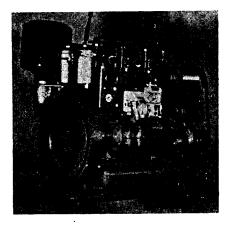
The water-cooled, four-stroke, four-cylinder engine is provided with a double-piston pump, air-starter, reduction and reversing gearbox, shaft guide and propeller. Output: 90 H. P. at 1500 r. p. m. Weight: 1540 kg.

STROJEXPORT

# 11/016 Marine Diesel Generating Set with ŠKODA 6L 110 Engine

The water-cooled, six-stroke, six-cylinder engine is provided with a double-piston pump, air-starter, revesing and reduction gearbox, shaft guide and propeller. Output: 90 H. P. at 1500 r. p. m.

STROJEXPORT



11/017

#### 11/017 Two-Stroke ŠKODA 3 D 110 Oil Engine

A water-cooled, three-cylinder, twostroke engine with an output of 65 H. P. at 220 r. p. m. and with electric starting. Weight: 480 kg. STROJEXPORT

#### 11/018 SKODA 4R 140 Oil Engine

A vertical four-stroke in line oil engine with fuel injection into the precombustion chamber. Output: 114 H. P. at 1500 r. p. m. Electric starting. The engine finds use with power generators, compressors, pumps, etc.

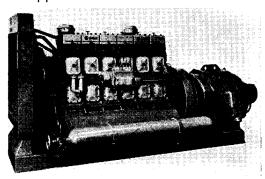
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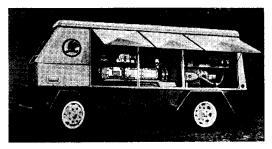
#### 11/019

#### Automatic Emergency 150 kVA Diesel Power Station with ŠKODA 6 S 160 Engine

Pneumatic starter, automatic switching on or off, alarm signalling device. Speed: 1000 r. p. m. Output: 180 H. P. Water cooling. Generator output: 150 kW. The automatic emergency 150 kVA Diesel power station is used in hospitals, stores and banks where it provides an immediate supply of electric current when the power supply from the public net is interrupted.

STROJEXPORT





11/020

#### 11/020 Mobile 125 kVA Diesel Power Station with ŠKODA 6R 140 Engine

suitable for use in open terrain, agriculture and on building sites. Maximum travelling speed (trailed): 60 km. per hour. All wheels are provided with air brakes. The special design ensures rapid transport and enables the set to be promptly set in operation in case of a break-down. Speed: 1500 r. p. m. Output: 170 H. P. STROJEXPORT

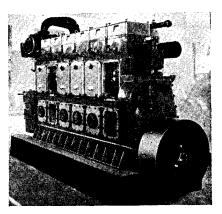
#### 11/021 ŠKODA 6L 160 Oil Engine

A water-cooled, four-stroke, six-cylinder engine. Speed: 750 r. p. m. Output: 135 H. P. STROJEXPORT

#### 11/022 ŠKODA 450 kVA Diesel Generating Set

The set consists of a ŠKODA 6S 275 stationary oil engine with supercharging and 540 H. P., output at 500 r. p. m. The Diesel generating set

can be used for driving machines, compressor stations, pumping stations, as well as for lighting cities and villages. STROJEXPORT



11/023

#### 11/023 Direct Reversing ŠKODA 6L 275 PN Marine Oil Engine

with double piston pump, compressor, remote control, signalling and supercharging equipment, for use with passenger boats, tugs, etc. Output: 525 H. P. at 50 r. p. m.

STROJEXPORT

# 11/024 Rail Traction ČKD K 12 V 170 DR Oil Engine with Supercharging

A water-cooled, four-stroke, twelve-cylinder engine of a maximum output of 700 H. P. at 1400 r. p. m., with low-pressure supercharging, of 700 H. P. at 1400 r. p. m. with medium pressure supercharging, and of 800 H. P. at 1400 r. p. m. with medium pressure supercharging and intermediate radiator.

STROJEXPORT

#### 11/025 DB - 1872 - A Engine

A single-cylinder two-stroke air-cooled petrol engline of 5.3 H. P. rated output at 2300 r. p. m. It is designed for use with small agricultural and building machines, Weight: 68 kg.

STROJEXPORT

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Machine, Waterproofness Testing Machine, Crease

Resistance Testing Machine, Yarn Tension Meter

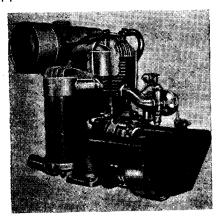
and a number of other instruments which are indispensable for up-to-date textile laboratories and testing rooms

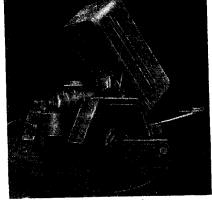
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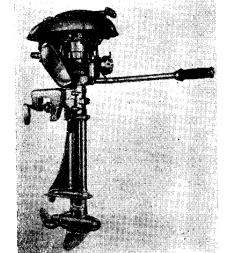


11/025

11/027

#### 11/027 3.1 kVA Generating Set MV 214

Mobile, with petrol engine, designed for use with telecommunication amplifying equipment, communication service equipment, etc. It produces three-phase alternate current of 220/380 voltage and 50 c/s. STROJEXPORT



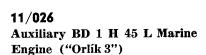
11/026

#### 11/028 Automatic Emergency 3.1 kVA Power Station, Type MV 216

with petrol engine. The power station ensures the supply of electric power in case of break-down of the main power supply.

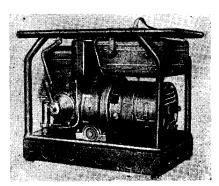
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11/029



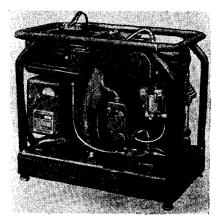
A two-stroke, water-cooled, single-cylinder engine to be attached to small boats, canoes, etc. Output: 2.5 H. P. at 4000 r. p. m. Weight: 14 kg.

STROJEXPORT



#### Mobile Petrol-Electric Generating Set ZB 6 ZG 53

The ZB 6 driving engine is a 1.5 H. P., 3000 r. p. m. two-stroke air-cooled engine. The ZG 53 generator is a twopole, synchronous, single-phase type generator with own excitation, intended for continuous operation. 220 V, 2.6 A alternate current is generated. Weight: STROJEXPORT



11/030

#### 11/030 Mobile Petrol-Electric Generating Set ZB 5 ZG 51

The set is provided with a two-stroke, air-cooled, single-cylinder ZB 5 engine of 3 H. P. output at 3000 r. p. m. The ZG 51 generator serves for charging STROJEXPORŤ batteries.

#### 11/031 BD 15 50 A Engine

A water-cooled two-stroke, single-cylinder engine of 1.6 H. P. at  $3000\,r.\,p.\,m.$ , suitable for driving small agricultural and building machines.

STROJEXPORT

#### ČKD Hydraulic Transmission, **Type H 350 L**

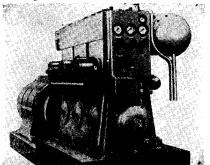
designed for locomotives which are used for shunting service in foundries, steel-works and for railway-track re-

pairs. The transmission consists of two hydraulic circuits. Speed: 1400 r. p. m. STROJEXPORT Weight: 1740 kg.

#### 11/033

#### Vertical Single-Stage Two-Stroke Double-Cylinder Air-Compressor 2 SK 200 B

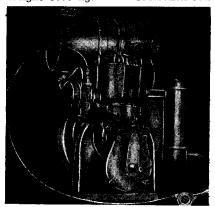
designed especially for use in the food and chemical industries where perfect clean air is required without the slightest trace of oil. Diameter of cylinders 200 mm. Input at 4 atm. 42 H. P. Input at 6 atm. 44 H. P. Speed STROJEXPORT 590 r. p. m.



11/034

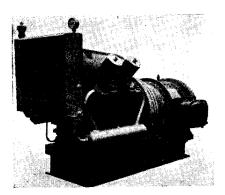
#### 11/034 ČKD Vertical Two-Stage Single-Stroke Three-Cylinder Air Compressor 3 DSK 350-1

for use in mines, steel-works, foundries, chemical works, etc. Diameter of cylinders 350/280 mm. Speed 600 r. p. m. Sucked volume 1600 cu. metres per hour. Working pressure 8 atm. STROJEXPORT Weight 3000 kg.



#### 11/037 Automatic Mobile Compressor Station ATMOS V2S-1000

for spraying with paints and varnishes and for various pneumatic appliances. Delivered volume of air 56 cu. metres per hour. Working pressure 6 atm. Weight 405 kg. STROJEXPORT



11/038

366

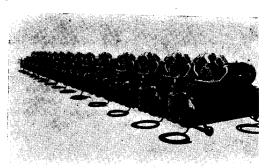
#### 11/038 High-Pressure Stationary Compressor ATMOS V4-C-1600

Forced feed circulation lubrication, efficient cooling. The automatic pressure reducing valve reduces the pressure in pipes and coolers to atmospheric pressure so that a lower starting current of the electric motor is obtained when short-circuiting. Delivered volume of air 85 cu. metres per hour. Working pressure 30 atm. Weight 720 kg.

STROJEXPORT

#### 11/039 Air-Cooled Rotary Compressor ATMOS R 200

used as a compressor or air pump if inversely connected to the piping. Suitable for pumping air or chemically clean vapours, for use with refuse removal trucks. Delivered volume of air 220 cu. metres per hour. Working pressure 2.5 atm. Speed 1440 r. p. m. Weight 143 kg. STROJEXPORT



11/040

11/037

#### 11/040 Stationary Air-Compressor ATMOS WS 3.2 - EKO

used in plants where a large quantity of compressed air is required and with pneumatic tools - in quarries, mines, etc. Since cooling water is not required the danger of overheating or freezing at a normal ambient temperature is eliminated. Circulation pressure lubrication. Delivered volume of air 330 cu. metres per hour. Working pressure 7 atm. Electric motor 42 kW. Weight 1400 kg.

#### 11/041 Air-Cooled Rotary Compressor ATMOS VR-200

substitutes piston compressors of the same output and pressure. Delivered volume of air 200 cu. metres per hour. Working pressure 7 atm. Electric motor 35 kW. Weight 500 kg.

STROJEXPORT

#### 11/042 Stationary Air-Compressor ATMOS WS 6,2 - EKO

used in industrial undertakings where a large quantity of compressed air is required as well as with pneumatic tools in quarries, mines, etc. Delivered volume of air 660 cu.metres per hour. Working pressure 7 atm. Electric motor 75 kW. Weight 1950 kg.

STROJEXPORT

#### 11/043 Mobile Compressor DK 320

A double-stage mobile compressor with a 65 H. P. air-cooled Tatra T 108 engine. End pressure: 7 atm. Output: 5.4 cu.metres per min. Weight of the set: 2400 kg. STROJEXPORT

#### 11/044 Mobile Compressor ATMOS EK 5

A double-stage compressor of 7 atm. end presure and 10.2 cu.metre output per min., with electric motor. Weight of the set: 3400 kg. STROJEXPORT

#### 11/045 Mobile Compressor ATMOS DK 4R

used for the production of compressed air for driving pneumatic riveting machines, hammers, drills and roadmaking machines on building sites, roads, railway tracks, in mines and stone pits. The compressor is arranged as a trailer, and is provided with air brakes and a hand brake. Delivered amount of air: 350 cu.metres per hour. Working pressure: 7 atm. Weight: 3600 kg. Maximum speed (trailed): 60 km. per hour.

#### 11/046 Mobile Compressor ATMOS, Type DK 600

A double-stage mobile compressor with a 90 H. P. air-cooled Tatra T 111 engine. End pressure: 7 atm. Output: 9.2 cu.metres per min. STROJEXPORT

#### 11/047 Trailer Compressor ATMOS, Type K1Z

A single-stage trailer compressor with a three-cylinder, air-cooled engine. Speed: 1200 r.p.m. End pressure: 6 atm. Output: 1.5 cu.metre per min. The compressor drive is effected from the tractor by means of a gearbox.

STROJEXPORT

#### 11/048 Cross-Section through Compressor

The compressor is an air-cooled twostage ATMOS K2 compressor. Delivered amount of air: 3.5 cu.metres per min. Working pressure: 7 atm.

STROJEXPORT

#### 11/049 Automatic Mobile Compressor Station ATMOS P1 - S

designed for spray-painting, etc. Delivered volume of air 5.5 cu.metres per hour. Working pressure 6 atm. Weight 125 kg. STROJEXPORT

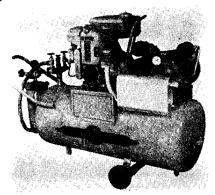
#### 11/050 Stationary Air-Compressor ATMOS PV2 - EKO

for inflating tyres and various pneumatic appliances. Easy operation. All moving parts are automatically lubricated. The compressor operates for eight hours without interruption. Delivered volume of air 11 cu.metres per hour. Working pressure: 6 atm. Electric motor 1.1 kW. Weight 85 kg.

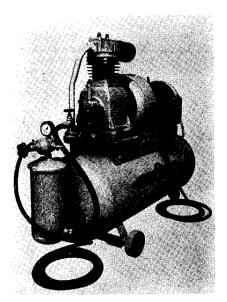
#### STROJEXPORT

#### 11/051 Mobile Compressor Station ATMOS PV2-RZB 2

for inflating tyres, spraying with paints and varnish and for various pneumatic appliances. Two-stroke single-piston vertical air-cooled petrol engine with speed reduction device. The compressed air is supplied from the air chamber or the reducing valve. Delivered volume of air 11 cu.metres per hour. Working pressure 6 atm. Output 3 H. P. Weight 205 kg.



#### 11/051



11/052

#### 11/052 Automatic Mobile Compressor Station ATMOS K1S-1000

used for spraying paints and varnishes, inflating tyres as well as for various pneumatic appliances. Economic operation. Minimum of maintenance is required. Delivered volume of air 28 cu.metres per hour. Working pressure 6 atm. Weight 245 kg. STROJEXPORT

Mobile Petrol-Electric Power Plant, Type T 603 B - ZG 62, Output 15 kVA, and Type T 603 C - ZG 61, Output 30 kVA

The two power plants are driven by a Tatra 603 petrol engine.

STROJEXPORT

#### 11/054 Supercharging Blower PDH 16 N

low-pressure, water-cooled type for supercharging oil engines, driven by an exhaust gas turbine. Suitable for 225 to 350 H. P. engines. STROJEXPORT

#### 11/055 Supercharging Blower PDH 25 S

low-pressure, water-cooled type for supercharging oil engines, driven by an exhaust gas turbine. Suitable for 350 to 600 H.P. engines with supercharg-STROJEXPORT

#### 11/056 Supercharging Blower PDH 35 N

medium-pressure, water-cooled type for supercharging oil engines, driven by an exhaust gas turbine. Suitable for engines of 600 to 900 H. P. output STROJEXPORT with supercharging.

### Supercharging Blower PDH 16 S

medium-pressure, water-cooled type for supercharging oil engines, driven by an exhaust gas turbine. It is designed for use with 250 to 400 H. P. engines with supercharging. STROJEXPORT with supercharging.

#### 11/058 **Low-Pressure Supercharging** Blower RN 10

water-cooled, for supercharging oil engines, driven by an exhaust gas radial flow turbine. By means of low-pressure supercharging the continuous engine output is increased by 50 p. c. and the engine thermal efficiency is improved by 6 to 8 p. c. Designed for use with 150 to 180 H. P. engines (supercharged). STROJEXPORT

### 12 DEVELOPMENT EXHIBITIS OF RESEARCH INSTITUTES

#### 12/001

#### Ultrasonic Impulse Equipment

for ascertaining internal cracks and flaws of large forgings.

#### 12/002

Gammagraphy used for the production of fittings and for checking welds

The cracks and flaws, detected by gamma-rays, are recorded on a film (gammagram).

#### 12/003

Contactless measuring of sheet thickness by means of radio active isotones

based on the absorption of  $\beta$  rays of radio active isotopes in the measured materials. A 2 p. c. change in the sheet thickness already results in a ligible indicator deviation. A full deviation of the indicator is obtained when the sheet thickness changes by 20 p. c. from its nominal value.

#### 12/004

### Recording equipment for automatic ultrasonic testing of bearing pans

Incorrect joints of the bearing pan lining are ascertained by means of the traversing method; the bearing pan is immersed in water.

#### 12/005

#### Case Hardening in Gas Atmospheres

The exhibit shows a model of a hardening plant where this modern and economical technological process has been adopted, as compared with an old hardening plant.

#### 12/006

### Nitriding Cutting and Pressing

By saturating with nitrogen a thin layer of the surface of hardened tools

made of high-speed and ledeburite steels, a very hard, wear resisting layer is obtained.

#### 12/007

#### Surface Flame Hardening

enables large parts to be hardened which are difficult to harden otherwise.

#### 12/008

### Optical and Magnetic Dilatometers

The optical dilatometer with mechanical enlargement of the measured deformation is suitable for static tensile tests of cylindrical and flat bars. Measured length: 100 mm. Measuring range (4 ranges): 0 to 250 microns.

#### Electromagnetic Recording Dilatometer

for static tensile tests. Range: 500 microns. Measured length: 100 mm.

#### 12/009

#### Heat and Corrosion Resistant Materials

The new heat resisting pyroferal alloy on aluminium base (30 p. c. of Al) is suitable for casting, and frequently replaces expensive and rare heat resisting materials on Cr and Cr-Ni base.

#### 12/010

#### Quality and Service Life of High-Pressure Fittings

The reliability of high-pressure fittings in operation is ensured by suitable and hard surface welded seats, wedges or cones and by selenium plating. In this manner, spindles, nuts and connecting bolts are prevented from seizing.

#### 12/011

#### Vibratory Equipment for Fatigue Tests of Turbine Blades

Alternate stresses are produced on the blade by vibration. The blade is seismically brought into resonance (by vibrating the base in which it is clamped). Weight: 400 kg. Output of amplifier: 1 kW.

#### 12/012

#### Vibratory Equipment for Measuring the Resonant Frequency of Turbine Blades

The vibrations of the blade are produced by an electromagnet without premagnetizaton. Weight: 70 kg. Accuracy: 2°/00. Output: 100 kW.

#### 12/013

#### PEVA 4 Balancing Machine

The machine serves for electric balancing of rotors without limiting their weight. Vibration range: 1 to 500  $\mu$ . Sensitivity of recorders: 30 mVs mm. Input: 100 VA. Weight incl. cables: 25 kg.

#### 12/014 Turbine Test Wheels

By means of these wheels the influence of the individual construction parameters on the efficiency of steam and gas turbine blades is systematically investigated.

#### 12/015

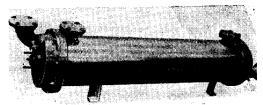
### Axial Test Compressor, 14 to 22,000 r. p. m.

Axial, four-stage type for the research of various types of blades. It is suitable for a speed of 14,000 to 22,000 r. p. m. The runner and guide blades are provided with cylindrical pins so that their angle of adjustment can be varied. Efficiency: 88 to 90 p. c.

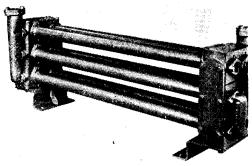
#### 12/016

### Blade Measuring Diffusor with Semi-Automatic Counter

The apparatus is intended for investigating the aerodynamic properties of blades of steam and gas turbines and axial compressors. Maximum speed of stream of air: 60 metres per sec.



12/017



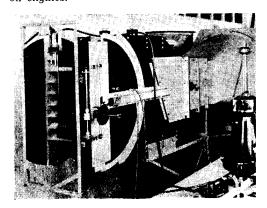
12/017

#### 12/017 Oil-Water Cooler

A cooler for oil or other viscous liquids. The thermal load of the working tube is about 2.5 up to 3-times higher than the load of the customary types of tubular coolers.

### Three-Medium Water-Oil-Water Exchanger

suitable for cooling oil and primary water of oil engines with secondary water circulation. It replaces two independent water and oil radiators of oil engines.



#### 12/018

### Precision Transducers for High and Higher Temperatures

Resistor transducer for gases from 100 °C below zero to 150 °C above zero with a short time-constant. Resistor transducer for gases from 0 to 850 °C with a short time-constant. Thermocouple transducer for temperatures from 0 to 1400 °C. Thermo- ouple transducer with a system of steel screening shells.

#### 12/019

# Samples of heat changing surfaces, pictures and diagrams of new types of heat exchangers

for intermediate air coolers of piston compressors, heaters and air-water coolers, air and water coolers of viscous liquids (oils) and new asbestos-cement cooling towers.

#### 12/020

#### A model combustion chamber for the second stage of blast-furnace gas combustion

for research purposes. It stands a maximum tested load of 1800,000 kcal. per hour.

#### 12/021

#### Ultrasonic Thickness Gauge

for measuring parts or their wall-thickness by means of ultrasonic waves. It is especially suitable for parts with one accessible wall only.

#### 12/022

#### Micro-Polarograph M 103

used for the qualitative or quantitative analysis of materials contained in the solution of the mercury drip electrode according to the method of Profesor Heyrovský.

#### 12/023 INTERFLEX Galvanometer N4b

suitable for measuring small currents and voltages. It is provided with an inbuilt shunt for sensitivity variation when currents are measured. Sensitivity regulation range: 1/1 to 1/10, 1/100, 1/1000.

#### 12/024

### Two-Circuit Mirror Galvanometer with Suspended Coil, Type Z

for power, ballistic, compensation and other measurements.

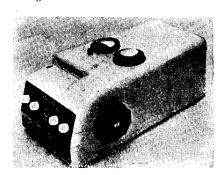
#### 12/025

#### Galvanometer Zs

The galvanometer serves as a zero indicator for accurate measurements on bridges and other structures by means of direct current. It is used for making photographic records of electrochemical processes (polarography).

#### 12/026 Universal Shunt R 4

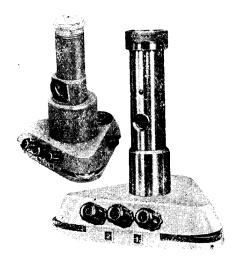
The shunt regulates the sensitivity of the galvanometer.

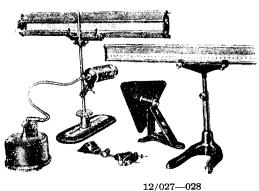


12/022

12/023







#### 12/027 Horizontal Reading Device

for objective reading of galvanometer deflections.

#### 12/028 Vertical Reading Device

for objective reading of mirror galvanometer deflections.

#### 13 MINES AND STEEL-WORKS

#### 13/001 Shortened Car Circulation

intended for unloading mine cars and returning them for further use in mines. Considerably shortened railyard length, lower gradient and faster discharging cycle. Dimensions: 9 metre width, 41 metre length. Weight including 10 mine cars: 42,000 kg. STROJEXPORT

#### 13/002 Dynamoelectric Firing Machine DEOS 25

with direct, hand-operated (rotatory) priming arrangement of electric glow (bridge) detonators for blasting operations in mines with fire hazard. Maximum number of detonators linked in tandem: 25. Resistance of priming circuit including supply cables must not exceed 110 ohms.

STROJEXPORT





# 13/003 Dynamoelectric Firing Machine DEOS 25/I

with direct, hand-operated (rotatory) priming arrangement of electric glow (bridge) detonators for blasting operations in mines; suitable for normal, dusty and humid conditions. Maximum number of detonators linked in tandem: 25. Resistance of priming circuit including supply cables must not exceed 110 ohms. Weight: 2.2 kg.

STROJEXPORT

# 13/005 Dynamoelectric Firing Machine DEOS 100

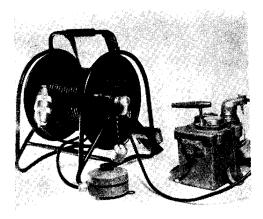
spring mounted, used for priming electric glow (bridge) detonators for blasting operations in mines with fire hazard. Maximum number of detonators linked in tandem: 100. Resistance of priming circuit including supply cables must not exceed: 500 ohms. Weight: 5.6 kg. STROJEXPORT



13/004

#### 13/004 Dynamoelectric Firing Machine DEOS 50

spring mounted, used for priming electric glow (bridge) detonators for blasting operations in mines with fire hazard. Maximum number of detonators linked in tandem: 50. Resistance of priming circuit including supply cables must not exceed 300 ohms. Weight: 5.20 kg. STROJEXPORT



13/006

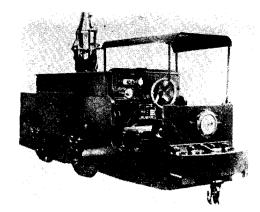
#### 13/006 Dynamoelectric Milli-Second Firing Machine DMDERS/54

spring mounted, used for electric priming of a set of glow (bridge) detonators at regular short intervals (e. g. 20 ms.) in mines with fire hazard and under normal conditions. Weight: 6.8 kg.

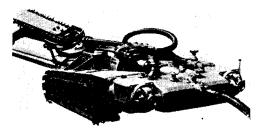
STROJEXPORT

#### 13/007 Overhead Wire Mine Locomotive Tld 6.5 II

used for haulage on 520 to 700 mm. narrow gauge tracks in mines without fire hazard. Speed up to about 20 km/hr. Tractive force in starting: 1300 kg. Weight: 6500 kg. STROJEXPORT



13/007



13/009

# 13/009 Shearing Coal Cutting Machine F20 HONM

mounted on a caterpillar chassis, and used in collieries for drivages of coal seams at least 700 mm. thick and inclines up to 28°. Output of the main motor used for the air-pressure drive of the cutting chain: 18 to 20 H. P. Air-pressure: 4.5 atm. Width of furrow: 90 to 100 mm. Height: 700 mm. Width: 1200 mm. Length: 4500 mm. Weight: 2634 kg. STROJEXPORT

#### 13/010

#### Shovel Loader NL-12-V

This shovel loader meets the requirement of the confined space encountered in mines. It is used for preparatory work in mines, tunnels, etc. up to a gradient of 8° and a distance of 2.2 metres from the rail head to the floor. Maximum length: 1855 mm. Minimum length: 1150 mm. Minimum width without controls: 800 mm. Minimum height:

1240 mm. Maximum height: 2010 mm. Gauge: 450 mm. Shovel capacity: 0.12 cu. metre. Weight: 2200 kg.

STROJEXPORT

#### 13/011

#### Boring Set B 120 M-2

for boring wells in soft or medium hard rock, for building, geology and other purposes. It is equipped with tools and accessories for mechanized rotary and drop drilling by free fall into a maximum depth of 120 metres (400 ft.) at a final diameter of the uncased borehole of 210 mm  $(8\,1/4^{\prime\prime})$ . The boring set consists of a derrick with a crown, and under-carriage, derrick lifting mechanism, block, rotary table, winch, driving set, drilling tools and accessories. Maximum depth of bore: 120 metres (400 ft.). Maximum depth of uncased borehole: 100 metres (300 ft.). Rotary table - free passage: 450 mm. (17 1/2"). Weight of boring set: 7140 kg. (7 tons). Weight of tools and accessories: 28,380 kg (28 tons).

STROJEXPORT

#### 13/012 Rotary Drilling Bits

for use, especially, in hard and very hard rocks.

- a) Roller drilling bits with outer attaching thread;
- b) Drilling bits with inner attaching thread;
- c) Four-roller drilling bits for core drilling (with inner attaching thread only);
- d) Six-roller drilling bits.

STROJEXPORT

#### 13/013 Škoda Rolling Mill - Baby Model

for smaller plants. Suitable for rolling various sections as well as flat steel; after a change of rollers even small sections of various shapes can be handled. For use with both blanks and scrap iron (for instance, split parts of rails). Rated output of train for steel, 1/2" in dia.: 5.4 tons per hour. For steel, 2,5"×80" in  $\square$ . TECHNOEXPORT

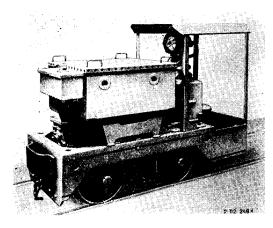
#### 13/014

### Three Product Coal Separator with Heavy Medium Closed Circuit

for the separation of black or brown coal according to its specific weight. Low electric power consumption. It

consists of the tank itself, channel, washed coal conveyor belt and waste and by-product conveyor belt. Working width of machine: 800 to 2400 mm according to the required output. Width of waste and by-product conveyor belt: 2200 mm.

STROJEXPORT



13/015

# 13/015 Explosion-Proof Accumulator Mine Locomotive Ald 2

intended for haulage in mines with fire hazard. Adjustable wheel gauge: 450 to 600 mm. The two driving axles are coupled and operated by one traction motor. Output of traction motor per hour: 3 kW. Permissible tractive force: 130 kg. Starting tractive force: 300 kg. Dimensions: Width (roof of cabin excluded): 800 mm. With roof: 1140 mm. Length: 2155 mm. Height: 1500 mm. Weight: 2200 kg. STROJEXPORT

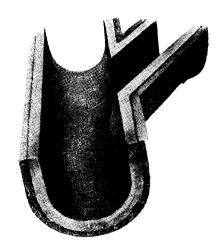
#### 13/016 Open Cast Mine Locomotive BND 30

Wheel gauge: 450 to 600 mm. Output: 30 H. P. Weight: 6300 kg.

STROJEXPORT

#### 13/017 Open Cast Mine Locomotive BND 15

Wheel gauge: 450 to 600 mm. Output: 15 to 20 H. P. Weight: 3800 kg. STROJEXPORT



13/018

#### 13/018

Parts of Stowing Pipes including fittings for pneumatic or hydraulic underground conveyance

KERAMIKA - STROJEXPORT

#### 13/019

Model of Steep Angle Conveying Equipment

Discharging device of the Steep Angle Conveying Equipment, underneath the brake box Part of a system of pipes, 300 mm. in dia. of a high-speed steep angle conveying equipment, basalt, fittings, tiles

KERAMIKA - STROJEXPORT

#### 13/020

### Pneumatically Controlled Plate Friction Clutch for Mine Hoists

for engaging or disengaging the loose and fixed drum of the mine hoist when passing from one horizon to another. Weight: 7000 kg. STROJEXPORT

#### 13/021 Steel Casting Ladle of 200 ton capacity

The ladle is lined with refractory bricks and the bottom is provided with a discharge hole controlled by discharge mechanism.

TECHNOEXPORT

### 13/022 Model of a Blooming Mill $\emptyset$ 1120

for rolling of blooms and slab blooms of slightly alloyed steels, particularly of chrome-nickel steels of a tensile strength up to 80 kg/sq. mm. Output 255—470 t/h. Rolling cycle 70—115 sec. TECHNOEXPORT

#### 13/023 Model of SM 400 t Tilting Furnace

for production of commercial quality steel; Talbot process is used. Output 29 t/h.

TECHNOEXPORT

#### 13/024 Mining Steel Equipment

Reinforcing flexible arches for propping up of galleries, headings, etc. TECHNOEXPORT

### 13/025 **Drilling Pipes, Casings**

pipes for pumps, oil pipelines, rib, flange, smooth, precise seamless and precise welded pipes; elbows, studded and shaped pipes and flanges.

STROJEXPORT

#### 13/026 Transport Chutes

for handling of coal, limestone, slag, gravel, stones and other loose materials. The transport chutes can handle up to 160 tons of material per hour.

STROJEXPORT

### 13/027 Battery of thickening Cyclons

in heavy fluid washing plants for partial dilution of the washing fluid and slimes. Output of a battery of 6 cyclones approx. 400—450 cu. m/h.

STROJEXPORT

#### 13/028 Washing Tank

for heavy fluid washing plant for processing of coal. Width of the tank 1000 mm. Length of the tank 7.826. Output of the tank 80 t/h.

STROJEXPORT

#### 13/029 Draining Screen

used in heavy liquid washing plants for draining of washed products. R. p. m. 540 STROJEXPORT

#### 13/030 Tool Joint

Whole and in cross section.

FERROMET

#### 13/031 Double Slip Point type T

is used in larger railway stations for its building length which makes easy the traversing in four and crossing in two directions. Its great advantage is in delaying the contact from the point of crossing and thus achieving a smoother riding of the vehicles over the frogs. The gauge is 1435 mm and the weight 25,830 kg.

STROJEXPORT

#### 13/032 Crushers and Separators

Jaw and laboratory crushers, grinders, hammer crushers, mobile crushing sets, vibrating separators, manganese winch.

STROJEXPORT

#### 13/033

**Products of malleable castings**STROJEXPORT

#### 13/034 Central Heating Boilers and Radiators

Pluto 2 boiler for burning coke of  $40 \times 60$  grain, anthracite, coke breeze, black non bituminous coal or wood. Boiler type E1 for burning oil. Boiler EIV-7 type for burning brown coal briquettes, brown coal in pieces or black non bituminuous coal, coke, wood or peat. Ligno-II-D for burning fuel of inferior quality. Single or double column radiators of various types.

STROJEXPORT

### 14 THERMAL MEASURING AND CONTROL INSTRUMENTS

#### 14/001 Profile Type Pressure Gauge

for indicating pressures, draughts or differential pressures in technical processes. Drum-type pressure gauges for pressures up to 4000 mm. of w. col., incorporating Bourdon tube operated pressure gauges for pressures of 1 to 100 kg./sq. cm. hydraulic pressure gauges for pressures above 100 kg./sq. cm. and differential pressure gauges for pressures up to 4000 mm. of. w. col. KOVO

#### 14/002

#### Pressure Gauges with Transmitter

(single or double) for electric remote transmission to electric indicators, line recorders or recorders with dotted record.

#### 14/003

#### Piston-Operated Pressure Gauge

for accurate measurement of pressures, remote transmission of the measured values as well as for signalling purposes within a range of 5 to 160 kg./sq. cm.

#### 14/004

### Low Pressure Recording Ring Balance

for pressure, vacuum or differential pressure measurements and recording.

KOVO

#### 14/005

#### **Draft Change-Over Switch**

enables successive changing over of the draft gauge to different measuring points.

KOVO

#### 14/006 Orifice Plates

intended for flow measurement of neutral liquids, gases and steam. Chamber type orifice plates with interchangeable measuring discs are used to a maximum pressure of 64 kg./sq. cm. Flat orifice plates are suitable for higher pressures or larger internal diameters of the pipe line. KOVO

#### 14/007 Indicating Float-Type Pressure Gauge

for measuring the flow of steam, water, air or gases up to a static pressure of 100 kg./sq. cm. KOVO

#### 14/008

### Recording Float-Type Pressure Gauge

intended for the flow measurement of steam, water, air or gases up to a static pressure of 100 kg./sg. cm. KOVO

#### 14/009

#### Indicating Ring Balance

intended for the flow measurement of air or gases up to a static pressure of  $1\ kg./sq.\ cm.$ 

### Low Pressure Recording Ring Balance

intended for the flow measurement and recording of air or gas up to a static pressure of  $1~\mathrm{kg./sq.}$  cm.

### High Pressure Recording Ring Balance

intended for the flow measurement and recording of steam, water, air or gases up to a static pressure of 40 kg./sq. cm.

#### 14/010 Float Liquid Level Gauge

for liquid level measurement in closed tanks under pressure. Suitable for working pressures up to 100 kg./sq. cm. KOVO

#### 14/011-013

### Resistance Thermometers and Pyrometers

for remote electric telemetering of temperatures of steam, gases and liquid in pipe lines, boilers, combustion chambers, flue gas ducts, kilns, etc. Resistance thermometers are designed for temperatures up to 550 °C. Pyrometers are suitable for temperatures up to 1600 °C. KOVO

#### 14/014 Electric Flue Gas Analyser

for measurement of  $CO_2$  and  $CO + H_2$  content in combustion products. KOVO

#### 14/015 Salinometer

for conductivity measurement of steam condensate. Measuring range: 0 to 25  $\mu$ S. KOVO

#### 14/016 Salinometer

for conductivity measurement of steam condensate.

#### KOVO

#### 14/018 Oxygen Meter

intended for measuring the volume of oxygen in gases. KOVO

#### 14/019

#### Electric Temperature Indicators

designed to indicate the temperatures measured by pyrometers. They are also used in conjunction with d. c. outlet transmitters for indicating other values of electrically measured variables.

#### Electric Indicators

with bridge cross-coil measuring system. They are designed to indicate the temperature measured by electric resistance thermometers. KOVO

#### 14/020

#### Numo Indicators

with null motor measuring system, designed for remote recording of measured values.

KOVO

#### 14/021 Point Recorders

Single-, two-, three- and six-point recorders with dotted record of 1 to 6 values.

#### 14/022

#### Line Recorders

with null motor measuring system, designed for remote transmission of values measured by pressure gauges, flow meters, etc.

KOVO

#### 14/023

#### Potentiometer Recorders

with compensating measuring system for temperature and other measurements. KOVO

#### 14/024

#### Capillary Tube Thermostat

intended for two-position temperature control or signalling in pipe lines, ducts and tanks. KOVO

#### 14/025

#### Room Thermostat

intended for two-position temperature control or signalling in regrigerating plants. KOVO

#### 14/026

#### Chopper-Bar Controller

for two-step control (on-off) or for temperature signalling. KOVO

#### 14/027

#### Magnetic Controller

for two-position temperature control, for use with resistance thermometers. KOVO

#### 14/028

#### Self-Operated Temperature Controller

for the control of the heating liquid flow. KOVO

#### 14/029

#### Manostat

for pressure control or signalling the pressure of air, gases, steam or liquids.

KOVO

#### 14/030

#### Float-Type Controller

for the control and signalling of the liquid level in closed tanks. KOVO

#### 14/031

#### **Electromagnetic Valves**

for the remote control of air, gas and oil flow. Also suitable for various liquids.

#### 14/032

#### Resistance Transmitters

for electric remote transmission of values measured by various instruments. KOVO

#### 14/033

#### **Change-Over Switches**

for switching on and over various a. c. appliances in limit positions. KOVO

#### 14/034

#### Jet Pipe Oil-Operated Controllers

of pressure, underpressure, differential pressure, ratio of pressures, underpressures and differential pressure temperatures with diaphragm operated, bellows operated and Bourdon tube operated transforming mechanism. KOVO

#### 14/035

#### **Hydraulic Power Unit**

lever type, straight lined. KOVO

#### 14/036

#### Air-Operated Control Instruments

Control pressure range: 0.7 to 3.5 kg./sq. cm. These instruments are designed for remote manual operation and automatic control of heavy industrial processes, especially of steam boilers. Pressure controllers, differential pressure and temperature controllers, piston power cylinders and accessories.

#### 14/037

#### **Pneumatic Pressure Controller**

measures the pressure deviations from the set point and converts them into control signals of the control air pressure.

#### 14/038

#### Pneumatic Controller for Great Differential Pressures

measures the differential pressure in the order of kg./sq. cm. and converts it into control signals of the control air pressure.

#### 14/039

#### Pneumatic Controller for Pressure, Vacuum and Small Differential Pressures

for pressure, vacuum or differential pressure control in combustion chambers, air-ducts, coal pulverizing mills, etc.

KOVO

#### 14/040

### Pneumatic Temperature

for air temperature control especially in the mill systems of steam boilers.

KOVO

#### 14/041

#### Piston-Operated Power Cylinder

for remote manual operation and automatic control. KOVO

#### 14/042

#### **Integrating Relay**

It emits a signal corresponding to the total or difference of several incoming signals, KOVO

#### 14/043 Ratio Relay

design to automatically maintain the set ratio of two pressures. KOVO

#### **Air-Operated Control Instruments**

with control air pressure gauge of 0.2 to 1.1 kg./sq. cm. A unit head line of instruments for remote measuring, recording, manual remote control and automatic control: Air-operated transmitters, remote indicating, recording and control instruments, diaphragm operated valves, piston operated power cylinders and supplementary instruments.

9g

Approved For Release 2007/08/22 : CIA-RDP80T00246A002500390002-0 THE ROUTE of the Magic Carpet The quickest to INDIA The quickest to SYDNEY The quickest to LONDON by Superconstellations AIR-INDII
International PRAHA, Národní třída 43



#### **ABRASIVES**

Grinding wheels
Emery paper and cloth

#### REFRACTORY PRODUCTS

Fireclay Silica Magnesite bricks

CAST BASALT



Foreign Trade Corporation

PRAHA II, V JÁMĚ I — CZECHOSLOVAKIA

#### 14/044

#### Air-Operated Pressure Transmitter

- a) Diaphragm-operated for pressure control and measurement up to 250 mm. of w. col.
- b) Bellows-operated for pressure control and measurement up to 2.5 kg./sq. cm.
- c) Bourdon tube-operated for pressure control and measurement up to 100 kg./sq. cm. KOVO

#### 14/045

#### Air-Operated Temperature Transmitter

- a) in conjunction with a potentiometer recorder, air-operated controller and remote control panel, with various ranges from -100 to +200 C. Minimum range: 50 °C.
- b) Quick-acting temperature transmitter for temperature measuring and control, of various ranges from -100 to  $\pm 200$  °C. Minimum range: 50 °C.

#### 14/046

#### Air-Operated Level Transmitter

for level measuring and control up to 200 mm. of w. col. KOVO

#### 14/047

#### Air-Operated Flow Transmitter

for flow measurement and control, nominal pressure: 160 kg./sq. cm. Differential pressure: 0 to 50 kg./sq. cm.

#### 14/048

#### Air-Operated pH Value Transmitter

for the pneumatic remote transmission of measured values. KOVO

#### 14/049

#### Central Pneumatic Relay

Pressure range of the pneumatic control signal: 0.2 to 1.1 atm. KOVO

#### 14/050

#### Hand Relay No. 07031

for pneumatic manual remote setting of the control body position. KOVO

#### 14/051

#### Control Panel No. 07041

for switching on or off of the pneumatic control. KOVO

#### 14/052

#### Booster Relay No. 07021

for amplifying the control impulses of the central pneumatic relay or pH transmitter. KOVO

#### 14/053

## Diaphragm-Operated Control Valves

for remote manual control or, in conjunction with low pressure air-operated controllers, for the automatic flow control of liquids and steam. They can be used with advantage especially in processes with a dangerous ambient.

Rated pressure 40, dia. 25 do. 40, do. 40 do. 40, do. 65 do. 16, do. 6

#### 14/054

#### Potentiometer Controller

for continuous control of temperature or other values, or successive temperature control by changing-over KOVO

#### 14/055

#### **Bridge Controller**

for three-impulse feeding control. KOVO

#### 14/056

#### Electric Power Unit P 2000 kg.

with control valve for for remote control and automatic control of larger fittings. Stroke of spindle: 80 mm. Threephase electric motor, 180 W, 380/220 V.

#### 14/057

#### Electric Power Unit P 500 kg.

with shut-off valve for remote control and automatic control of small fittings.

#### 14/058

#### Electric Power Cylinder P 2000 kg.

with shut-off valve for remote control and automatic control of larger fittings.

KOVO

#### 14/059-062

#### Electric Power Units with Rotating Output Shaft

for the control of shut-off or control fittings.

Type Mo 9 kgm. —

base or flange type for smaller

gate valves or for the operation of by-pass valves.

fype Mo 20 kgm. for medium gate valves and for high-pressure valves with relieved packing, where rapid and light closing is required.

Type Mo 80 kgm. — for remote operation of large fittings, especially gate valves.

KOVO

#### 14/063-066

#### Lever-Type Electric Power Units

for remote control and automatic control of throttling valves, dampers, slides, fan vanes, for the drive of motor brushes, transformers, etc.

Type Mp 2 kgm. Mp 25 kgm. Mp 100 kgm. KOVO

#### 14/067 Boiler Panel

for grate boilers with a capacity of 40 tons per hour, steam pressure of 40 atm., steam superheating of 425  $^{\rm o}{\rm C}.$ 

#### 14/068

Lever-Type Electric Power Unit, 25 kgm.

KOVO

#### 14/069

#### Electric Power Unit A 500

with feed valve.

KOVO

#### 14/070

#### Pneumatic Lever Power Cylinder

for the control of the speed of grate. KOVO

#### 14/071

#### Pneumatic Lever Power Cylinder

for the control of the fan control valve. KOVO

#### 14/072

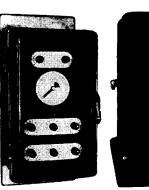
#### Maxigraph Křižík M6S

for marking on a paper chart the mean value of the measured load, such as electric power, within certain time periods, the so called integration periods. Voltage: 110 or 220 V. Input: 20 W. Weight incl. box: 28 kg. KOVO

#### 14/073

#### Despatching Cabinet Křižík DS6

designed for automatic checking of the consumed energy according to the determined chart. If the signalling device is set in operation and the consumer sections can also be cut off. Voltage: 110 or 220 V. Input: 35 W. Weight: 12 kg.



14/073







14/075

14/077

#### 14/074

## Accurate Three-Phase Three-Wire System Watt-Hour Meter P3

designed for measuring energy in three-phase three-wire systems. Available for rated voltages of 100, 110, 220, 380 or 500 V. Rated current: 1 and 5 A. Frequency range: 50 to 60 c/s.

#### 14/075 Single-Phase Watt-Hour Meter EJ 8

for measuring energy in single-phase a. c. systems. Available for rated currents up to 40 A with 100 to 200 p. c. of overload. Rated frequency range: 40 to 60 c/s.

KOVO

#### 14/076 Single-Phase Double Tariff Watt-Hour Meter EJ 8D

for measuring energy in single-phase a. c. systems by using two different tariffs. Available for rated currents of 5, 10, 20 and 30 A with 200 p. c. of overload, or for 5, 10, 20, 30 and 40 A with 100 p. c. overload. For rated voltages up to 400 volts. Rated frequency range: 40 to 60 c/s.

KOVO

# 14/077 Three-Phase Three-Wire System Watt-Hour Meter ET3

for measuring energy in three-phase three-wire systems at any required overload and phase shifting. Suitable for voltages up to  $3\times500$  V. Currents: 5, 10, 20, 30, 50, 75 and 100 A. Frequency range: 50 to 60 c/s (for one frequency only).

# 14/078 Three-Phase Four-Wire System Watt-Hour Meter ET4

for measuring energy in three-phase systems with neutral conductor at the required overload and phase shifting.

#### 14/079-080

## Three-Phase Double-Tariff Watt-Hour Meters ET3-4D

for measuring energy in periods to which two different tariffs apply. Their design does not differ from that of ET3 or ET4 watt-hour meters. They are, however, provided with a double counter.

# 14/081-082 Three-Phase Double-Tariff Watt-Hour Meters with Maximum Indicator ET3-4DM

In addition to the whole energy supplied, these watt-hour meters indicate the maximum average value of the load within a certain time period, the so-called intergration period. This period can be selected within a wide range.

#### 14/083 Signalling Wattmeter WSM

ensures the supply of energy up to a certain figure only. As soon as this supply is exceeded, it signals by means of the time lag relay.

KOVO

#### 14/084 Time Lag Relay ZRWS

serves for direct switching on the signalling devices and automatic switching off the contactor. KOVO

#### 14/085-086 Switch-Over Clock H2-D-M

serves for changing over the tariffs and switching on the maximum indicator of the watt-hour meter. KOVO

#### 14/087 Time Switch H2VS

designed for automatic switching on or off public illumination, shop window illumination, neon advertisements, accumulating stoves, steamers, etc.

. KOVO

## 14/088 Summation Clock SHS

The clock measures the number of hours during which an electrical appliance has been in operation, it indicates the extent to which it has been utilized, and ascertains the period of its operation when its service life has been guaranteed.

KOVO

#### 14/089 Automatic Parallelling Instrument RFS

The instrument immediately connects in parallel

- a) excited synchronous generators with one another and the consumer net,
- b) long sections of the net even under unfavourable operating conditions.

KOVC

#### 14/090 Comparative Voltage Equipment SE2

The comparative voltage equipment serves for automatic adjustment of the phased generator voltage to that of the net. It is available in a bakelite case, to be mounted on the panel. KOVO

#### 14/091 Automatic Synchronizing Equipment STU

intended for automatic synchronizing the alternator speed with the frequency of the net before the alternator is connected. The instrument enables to set the impulse period within a wide range and limits the impulse density.

KOVO

#### 14/093

#### Reactive Power Regulator WOR-8

for automatic regulation of reactive power by switching on or off the regulating stages of a condensor battery.

KOVO

#### 14/094 Auxiliary Case WOR-p

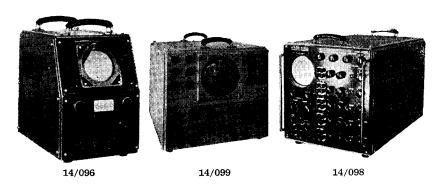
An auxiliary equipment designed to increase the number of regulating stages of the WOR-4 or WOR-8 regulators by further 4 stages. The case contains four auxiliary relays of RP 90 type with resistors.

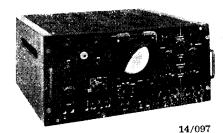
#### **14/095** Oscilloscope **T** 531

designed for the observation of voltage wave-forms of the lowest frequency (of d. c. voltages) up to 2 Mc/s. A vide frequency range of the amplifiers and time base make the oscilloscope suitable for various engineering, physical, chemical or biological research. KOVO

#### 14/096 Measuring Oscilloscope T 565

suitable for impulse measuring. This oscilloscope enables the observation of wave-forms and measurement of d. c. voltages of a frequency of 0 to 1 Mc/s.





#### 14/097 Double-Beam Oscilloscope D 536

A universal oscilloscope which serves for the observation of voltage walve-forms and phase of the lowest frequency up to 1 Mc/s. It is suitable for the observation of periodic and aperiodic currents of 10 mV to 500 V. KOVO

#### 14/098 Five-Beam Oscilloscope K 552

This universal oscilloscope serves for the simultaneous observation of voltage wave-forms and phase of up to five voltages of the lowest frequency up to 1 Mc/s (of d. c. voltages). KOVO

#### 14/099 Double-Beam Oscilloscope D 564

This universal oscilloscope is designed for independent double observation. It is suitable for the observation of periodic and aperiodic voltages of 10 mV to 500 V of the lowest frequency up to 1 Mc/s (even of a. c. voltages). KOVO

#### 14/100 Ten-Beam Oscilloscope K 572

This oscilloscope serves for simultaneous ten-beam observation on one screen. It is used for measuring complex regulation systems of mechanical structures (by means of a tensometer).

KOVO

#### 14/101-104 Polaroscope P 576

The polaroscope finds use in qualitative or quantitative oscillographic polarography. The curves which are shown on the screen, correspond to the composition of the tested solution. By means of in-built calibrating instruments, both qualitative and quantitative analysis can be made.

## **14/102** Ferroscope F 563

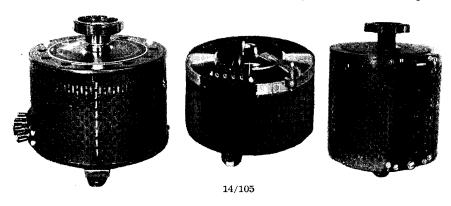
serves for checking magnetic materials, especially iron by means of the comparative method.

### **14/103 Preamplifier Z 562**

This instrument is designed to increase the sensitiveness of standard type oscilloscopes with d. c. amplifiers. It amplifies voltages of 0 to 50 kc/s, and finds use in industries where oscilloscopes are used. KOVO

#### 14/105 Regulating Auto-Transformer RT 2.5 (RT/A 2.5)

for continuous manual regulation of a. c. voltages within a wide range.



## Regulating Auto-Transformer RATIO, RAT3×10

with an adjustable a. c. voltage source from 0 to 250 V at 10 A maximum demand. It is fed from 220 or 120 V single-phase mains.

# 14/106-109 Alternate Voltage Electronic Stabilizers ST250 ST500 ST

Stabilizers ST250, ST500, ST1000, ST2000, ST5000

serve for stabilizing the net voltage fluctuation of  $-15\,\mathrm{p.\,c.}$  to  $+10\,\mathrm{p.\,c.}$  of. the 220 V rated voltage, i. e. from 190 to 240 V. They compensate simultaneously for the losses arising at overloads so that the input voltages of appliances can be stabilized despite a highly fluctuating load and frequency of 45 to 65 c/s.

#### 14/110 Current Transformer IVN

intended for measuring alternate currents from 5 to 30 A at a rated secondary current of 5 A (1 A exceptionally).

#### **Current Transformer IVT**

intended for measuring higher alternate currents from 100 to 600 A.

#### Current Transformer IVm

intended for measuring higher alternate currents from 50 to 300 A.

#### **Current Transformer IVD**

serves for measuring higher alternate currents of maximum rated values within a range of 50 to 800 A.

#### **Current Transformer IVP**

serves for measuring alternate currents of maximum rated values within a range of 1000 to 10,000 A. KOVO

# 14/111 Quick-Acting Distance Protective

Relay for earthed nets of very high voltages D 110

Rated values 1 or 5 A, 100 V, 50 c/s. Auxiliary voltage 110 or 220 d. c. voltage. Weight 65 kg.

STROJEXPORT

#### 14/112 Universal Moving Coil System Relay UCR

The moving coil is in the field of a permanent magnet (Depréz d'Arsonval System). It serves as an indication relay for bridge connections (type 1) or a measuring relay of d. c. values or with a. c. rectifiers (type 2). KOVO STROJEXPORT

# 14/113 Relay Automatic for Three-pole Repeat Switching OZ31

The OZ31 automatic controls three-pole reswitching in the case of a breakdown in the net. It provides for definite switching off in case of a permanent breakdown or short-circuit. STROJEXPORT

# 14/114 Relay Automatic for Repeat Switching for very high voltages OZ101a

The OZ101a automatic controls a singleor three-pole reswitching cycle with an adjustable currentless interval. Should a further breakdown occur during the reswitching cycle, the net is cut off definitely. STROJEXPORT

#### 14/115 Longitudinal Comparative Protection Relay S30A

The relay is designed to protect short sections of the supply line where a minimum cut out period is required during a breakdown. Voltage transformers or d.c. auxiliary sources are not required.

STROJEXPORT





14/115

14/116

#### 14/116 Comparative Phase Protection Relay S102

for outdoor lines or cables- in systems with insulated or earthed neutral. The relay operated in single-relay connection with transformer. STROJEXPORT

#### 14/117 Time Relay TD1

High service-life. Designed for delaying the control impulses in installations where a high service-life and frequent switching is required (for instance in automatic machine tools).

STROJEXPORT

#### 14/118 Overcurrent Time Relay A3T

The relay delays the action of switches during short-circuits or overloads. It serves for the protection of earthed three-phase mains and installations.

#### 14/119 Two-Phase Overcurrent Protection Relay A2M1

for switching off with measuring transformer current. The relay delays the action of switches during short-circuits or overloads. It serves for the protection of three-phase non-earthed mains and installations. STROJEXPORT

#### 14/120 Protection Relay for Asymmetrical Overloads N10

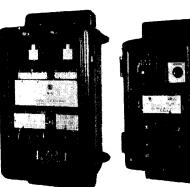
A double-stage protection for installations in three-phase systems, subjected to non-asymmetrical overloads. STROJEXPORT

#### Earth Fault Generator Rotor Protection Relay GR 20

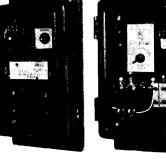
used for the protection of generators. STROJEXPORT

#### 14/122 Voltage Relay F 1

for winding protection or earth stator protection of generators operating in block with a transformer. The relay is provided with a time member and indicator and output relay with drop flag. STROJEXPORT



14/120





14/121

14/123

14/125

#### 14/123

#### Frequency Protection Relay F 3

for switching off less important sections of the net at overloads resulting in the frequency drop. STROJEXPORT

#### 14/124

#### Fault Phase Sequence Protection Relay VN1

for the protection of installations with three-phase drive at fault phase sequence (for instance, suitable for elevator motors). STROJEXPORT

#### 14/125 Fine Time Relay T

for delayed impulse switching at given periods with a high accuracy.

#### Long Term Time Relay TM

for a delayed action of control impulses in automatic installations. The synchronous motor with transmission and electromagnetic clutch and the auxiliary relay are in-built to a common case.

STROJEXPORT

#### 14/126 Auxiliary Relay RP 40

for smaller outputs, suitable for d. c. installations.

#### Auxiliary Relay RP 90

A small auxiliary relay with a high switching frequency. The relay should be in-built to the control equipment or apparatus.

#### Auxiliary Relay RP 100

A small auxiliary relay with a high switching frequency. The relay should be in-built to the control equipment or apparatus.

#### **Excitation Relay RPK**

for remote control by current impulses or current interruption.

STROJEXPORT

#### 14/127

#### Remote Measurements

of electrical and non-electrical quantities in power installations, iron works and mines. Measurement of power supply and consumption. KOVO

#### 14/128

#### Magnetic Amplifier

comprises no rotating components nor contacts, has a practically unlimited life, requires no maintenance, is shockproof, instantaneously ready for service and can easily be tested. KOVO

#### 14/129

## ROME Magnetic Speed Regulator of D. C. Machines

for economically varying, at will, the speed of a D. C. motor from zero to the maximum speed, and for maintaining it at a constant value. Accuracy of maintained speed  $\pm 1$ %. Supply voltage  $3\times380$  V.

Type ROME 0.3 Type ROME 0.7

motor output 0.3 kW motor output 0.7 kK

KOVO

#### 14/131

## Pilot-less Remote Control (of cranes)

suitable for use in industrial installations under heavy service conditions. Frequency 27,120 mc, 8 independent control channels. KOVO

#### 14/132

#### Non-contacting Thickness Meter

for measuring the areal weight of various materials by means of the beta radiation of various radio isotopes.

KOVO



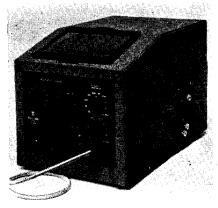
14/133

#### 14/133

#### Loss-angle Meter

for measuring the loss angle of electrical motors and generators at the respective working voltage; it is very useful in the production of electrical machines.

KOVC



14/134

#### 14/134 Ferrograph

for measuring special magnetic materials with a high initial permeability.

KOVO



14/135

## **14/135** Ferrometer FM 02

is an electronic measuring instrument for measuring the magnetic properties of transformer and dynamo sheets for ascertaining quickly and accurately all values necessary for the qualification of ferro-magnetic materials. Supply voltage 220 V.

#### 14/136 Quality and Quantity Analyzer

for qualifying the realization of the production schedule in the course of the work-shift.

#### 14/137 Transient Phenomena Recorder

produces simultaneously graphic records of six phenomena on the tape of a magnetic recorder. Frequency band 0-1 kc.

## 14/138 D. C. Tachodynamos T1 and T2

serve as control elements of servome-chanisms and for indicating the number of revolutions. Excitation by means of permanent magnets, linearity  $\pm 1\%$ , the maximum A. C. component of the D. C. voltage is 0.5%.

#### 14/139 Two-phase Induction Servomotors SMA 1, SMA 2.5, SMA 5

serve as control elements in servomechanisms with the motor acting as the source of mechanical energy. Voltage 115 V, 500 c/s, outputs 1—2.5—5 W. KOVO

#### 14/140 Metal Thyratrons TK

for use as controlled electronic valves. Available types TK 001, TK 002, TK 003 (directly heated), and TK 004 (indirectly heated). STROJEXPORT

# **14/141 Mercury Switches up to 30 A, 250 V A. C.**

for small controlling forces and for making and breaking relatively large making and breaking capacities. Made of soft glass for small capacities and current ratings up to 10 A at 250 V A. C., or with a ceramic insert up to 15 A at 250 V A. C., or of hard glass for current ratings up to 15 A at 250 V A. C., or with a ceramic insert for current ratings up to 30 A at 250 V A. C. STROJEXPORT

#### 14/142 Types ERO 3100 R and ERO 375 R Speed Regulators of D. C. Motors

for gradually varying, at will, the speed of motor drives. Large range of speed variation independent from the load. Speed selection by means of a small potentiometer which makes it also suitable for remote control.

STROJEXPORT

# 14/143 Electronically Controlled Rectifier U 300/25-R-30

STROJEXPORT

# 14/144 Electronic Lighting Regulator ERSt 120

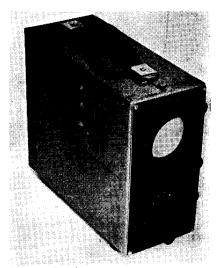
for gradually varying, at will, the brightness of filament and other lamps. No loss of power during the process of regulation. The regulation is based on the application of two thyratrons TK 001.

STROJEXPORT

# 14/145 Testing Device VELTECHNA CS III

used for calibrating single-phase and three-phase eletricity meters, and for

laboratory measurements (testing of electricity meters, measuring instruments, relays, etc.). KOVO



14/146

#### 14/146 Control Oscillograph

used for control and maintenance of instruments for remote measurements of the range of acoustic frequencies and D. C. voltages. Rated supply voltage 220 V.

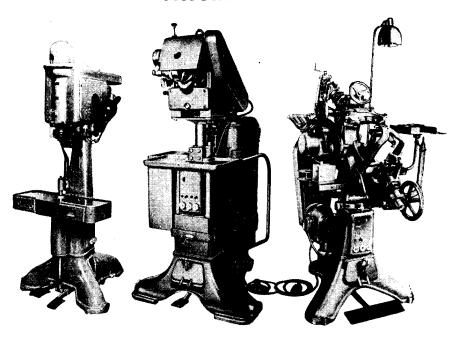
KOVO

From the periodical

### CZECHOSLOVAK FOREIGN TRADE

you can learn about the products you have not seen at the exhibitions. The periodical appears three-times a year in six languages and contains information on the export products of all branches of the Czechoslovak industry.

# 15 TEXTILE, FOOTWEAR AND GRAPHIC MACHINERY



15/011 15/009 15/008

# 15/001 ` Folding Up Machine, Serial No. 01221

The machine is used for flanging and folding up skived parts of upper leather or canvas in the manufacture of upper parts. The machine replaces, to a great extent, folding up by hand. Approximate weight: 107 kg. KOVO

#### 15/002 Chainstitch Arm Sewing Machine, Serial No. 01086

The machine finds use in the footwear industry. Two needle reinforcing binding sewing machine; needle pitch: 3.2 mm. Two needle faulse instep sewing machine; needle pitch: 8 mm./ 1.2 mm. Maximum number of stitches: 3000 per min. Maximum thickness of sewn material: 4 mm. Weight: 99 kg. KOVO

# 15/003 One Needle Post Bed Sewing Machine with Trimmer, Serial No. 01090

The machine is used for bordering foldsed uppers while simultaneously trimming the lining, or for bordering unfolded uppers with simultaneous trimming of the upper leather together with the lining. The design of the post bed machine enables easy guiding and turning of the upper in all directions. Maximum number of stitches per min.: 2700. Stitch length adjustable from 3 to 8 stitches per 1 cm. Weight: 108 kg.

#### 15/004 Heavy Duty Single Needle Post Bed Sewing Machine, Serial No. 01192

The machine serves for sewing on vamps of working boot uppers. Appro-

ximate output: 400 pairs. Stitch number per minute: 1400. Stitch length adjustable from 2 to 4 stitches per 1 cm. Weight: 180 kg. KOVO

#### 15/005 Heavy Duty Binding Sewing Machine, Serial No. 01119

The machine is used in the footwear industry for binding working boot uppers as well as for binding other products of medium tough materials. Maximum number of stitches per min.: 1400. Maximum thickness of handled materials: 12 mm. Approximate weight: 160 kg.

#### 15/006 Automatic Bobbin Winder, Serial No. 01218

The machine is used for automatic winding of bobbins for the shuttles of sewing machines. The bobbins must have even sides, their dimensions being 20 to 25 mm. in diameter and 7 to 15 mm. in width. The machine works reliably with yarn up to No. 4 thickness. Output per 8 hours: 1200 bobbins. If small bobbins are wound, the output is still higher. Approximate weight: 65 kg. KOVO

#### 15/007 Cement Applying Machine, Serial No. 02113

The machine is used for simultaneous applying of one, two or three layers of non-corrosive cement. Permissible thickness of materials: 0.4 to 6 mm. The applied cement layer is adjustable from 0.2 to 1 mm Approximate weight: 150 kg.

#### 15/008

## One Action Pulling Over Machine by Cementing,

Serial No. 02002/P 2

The machine supersedes toe flanging, lasting the forepart and roughing-up. It eliminates or combines several operations. Output of the machine in 8 working hours: 1200 shoes. Approximate weight: 790 kg.

\*\*KOVO\*\*

#### 15/009

## Rough Rounding and Chanelling Machine, Serial No. 04033

This machine serves to round and channel leather soles on lasted welt

and flexible footwear. Output of the machine per 8 working hours: 1000 pairs of welt footwear, or 1500 pairs of flexible footwear. Approximate weight: 236 kg.

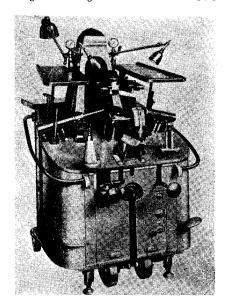
KOVO

#### 15/010 High-Speed Lockstitch Outsole Stitcher, Serial No. 03028/P 1

The machine is used for attaching leather and rubber soles to the welt or upper, employing two yarns to form a lockstitch. It is a high-speed machine, maintaining uniform, well tied stitches of good appearance. It will stitch any kind of footwear, from the lightest to the heaviest. Output in 8 working hours: When sewing heavy footwear, 350 to 400 pairs. Approximate weight: 380 kg.

#### 15/011 High-Speed Sole Screwing Machine, Serial No. 04113

The machine is used for attaching outsoles to heavy leather boots (working and skiing boots) by means of studscrews which the machine automatically cuts from a spool of helically grooved brass wire. Output: 110 studscrews per min. Adjustable screw length from 0 to 20 mm. Approximate weight: 375 kg.



#### 15/012

#### Universal Heel Attaching Machine, Serial No. 04222

With this machine any type of heel can be attached to footwear of all kinds. Hydraulic heel pressing force adjustable by hand wheel: 500 to 4000 kg. Output - according to kind of job - 900 to 2000 pairs in 8 hours. Approximate weight: 490 kg. KOVO

#### 15/013 Sole Edge Trimming Machine, Serial No. 04105

The machine is used for the edge trimming of men's, ladies' and children's shoes with leather or rubber soles. Output of the machine in 8 hours: up to 500 pairs, according to the kind of footwear. Approximate weight: 292 kg.

#### 15/014 Sole Bottom Ornamenting Machine, Serial No. 04170

Output of the machine in 8 working hours: 1000 pairs. Heating element: 24 V, 180 W. Approximate weight: 185 kg. KOVO

#### 15/015

#### Rubber High Boot Vulcanizing Press, Serial No. 10707

The machine serves for pressing and vulcanizing high rubber footwear and similar footwear with a high accuracy and uniform quality. Pressure: 150,000 kg. Approximate weight: 2000 kg.

#### KOVC

# 15/016 Rubber Boot Edge Trimming Machine, Serial No. 10610

The machine is used for trimming of the surplus edges of rubber boots. Speed of the machine (maximum number of cuts): 2770 r. p. m. Approximate weight: 100 kg. KOVO

#### 15/019 Jet Loom P 45

The loom is built for weaving of light bandage-like cotton and spun yarn fabrics. The loom is of shuttle-less type. The shuttle picking motion is replaced by an air-jet, and weaving is effected directly from crosswound cones. Working width: 30 to 45 cm. Speed: 800 r. p. m. Input: 0.7 kW. Weight: 310 kg. KOVO

#### 15/020

#### Single-Cylinder Automatic Knitting Machine JDa-34

for the production of ladies' seamless stockings from polyamide fibres. Maximum output of the machine: 14 pairs in 8 hours. Number of needles: 400. Cylinder diameter:  $3^{3}/_{4}$ ". Approximate weight: 250 kg.

#### 15/021 Double-Cylinder Automatic Knitting Machine D 2 Rc

The machine serves for the manufacture of ladies' and men's socks, stockings and knee-socks. Electric motor: 0.25 kW. Weight: 275 kg. KOVO

#### 15/022

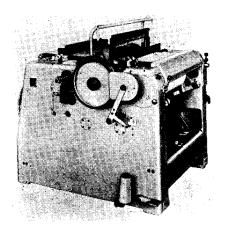
#### Interlock Circular Knitting Machine, cylinder dia. 18"

The machine is designed for the manufacture of underwear from cotton, wool, cellulose, rayon or polyamide. A great number of knitting systems ensures a maximum output. Approximate weight of plain hosiery per shift: 20 kg. Input: 1.1 kW. KOVO

#### 15/023 Bing Frame for Wet

## Ring Frame for Wet Spinning of Flax, Type 0800

The Ring Frame is designed for the production of flax-line yarns, flax tow 15/019



yarns and their mixtures. Number of spindles: 64. The standard type machine has 192 spindles. Range of spun flax tow counts: 7 to 15 cm. Range of spindle speeds: 3500 to 6000 r. p. m. Input: 10 kW. KOVO

#### 15/024 Hydraulic Calender 4624

This five-roller calender is designed for handling light and medium light fabrics made of cotton, linen, rayon and various fabric mixtures, about 80 to 250 gr./sq. metre in weight. Two types are available:

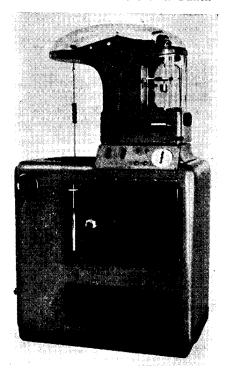
a) Rolling calenders.

b) Friction calenders.

Working speed: 40 metres per min. Maximum working width: 1000 mm. Input: 26.5 kW. KOVO

#### 15/025 Metrical Yarn Wrap Reel

The apparatus is intended for quick and accurate measuring of yarn length and ascertaining its count. It is suitable for smaller test rooms. Dimen-



sions: 725×633×370 mm. Approximate weight: 18 kg. PRAGOEXPORT

#### **Humidity Tester**

The apparatus ascertains the degree of humidity of all textile fibres by means of an accurate drying method. Dimensions: 620×1010×1690 mm. Approximate weight: 180 kg. PRAGOEXPORT



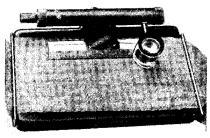
#### Weaver's Knotter

The apparatus increases productivity since it reduces the operating time in winding, warping and weaving. It ties reliably weaver's knots. Weight: 135 gr. PRAGOEXPORT

#### **Textometer**

The apparatus ascertains reliably the percentage of humidity of textile materials.

PRAGOEXPORT



Recording Fabric Strength Tester
The electrically driven Recording Fabric
Strength Tester serves for ascertaining
the strength and stretch of textile

fabrics, knitted materials, leather, wire and other materials. Dimensions: 580×2190×460 mm. Weight: 350 kg. PRAGOEXPORT

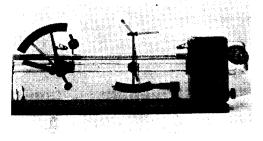
#### **Ends Counter 50**

The apparatus is used for determining the number of yarn ends in a textile fabric pattern, 50 mm. in width. Dimensions:  $110\times60\times50$  mm Weight: PRAGOEXPORT 0.7 kg.

#### Ends Counter 100

The apparatus serves for ascertaining the accurate number of yarn ends in a textile pattern, 100 mm. in width.

PRAGOEXPORT



#### Hand Operated Twist Tester

The apparatus is used for ascertaining the amount of twist or the number of turns in single- or multifold-twisted yarn. Clamping length: 0-50 cm., or 0 to 20 in. Dimensions:  $120\times320\times$ **PRAGOEXPORT** 850 mm.



**Electrically Driven Twist Tester** The apparatus is used for quick testing

and ascertaining the amount of twist of single- or multifold-twisted yarn. Infinitely variable speed range: 0 to 2000 r. p. m. in both directions. Dimensions:  $142 \times 343 \times 925$  mm.

**PRAGOEXPORT** 

### Rotary Cloth Wear Testing

**Machine** 

The machine serves for ascertaining the wear due to abrading of fabrics, cloths, rugs, etc. Dimensions: 270× 520×580 mm. Weight: 59 kg. PRAGOEXPORT

#### Thickness Meter

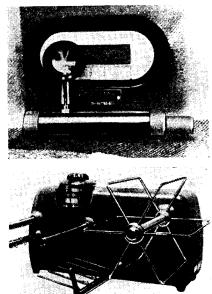
The apparatus is used for measuring the thickness of fabrics, felt, leather, etc. with an accuracy of 1/100 mm. Dimensions:  $120\times160$  mm. Weight PRAGOEXPORT 2.6 kg.

#### Isometer

The apparatus ascertains the nonuniformity of sliver and roving. Dimensions 245×150×300 mm. Approximate weight: 15 kg. PRAGOEXPORT

#### Sample Bag

is a simple and reliable packing for the transport of textile samples which maintain their constant humidity. Dimensions: 80 mm in dia., length: mensions: oo ....... 300 mm. Weight: 0.5 kg. PRAGOEXPORT



#### Double-Wall and Double-Crown Knotter

for yarn winding and other technological processes. Dimensions:  $22\times63\times$ 52 mm. Weight: 125 gr.

**PRAGOEXPORT** 

15/026 **Boxes - Textile Accessories** 

KOVO

#### 15/027

#### Automatic Loom F 44/1

The loom is designed for weaving cotton fabrics. Working width: 113 cm. Reed width: 120 cm. Speed: 190/200 r. p. m. Electric motor: 0.8 kW. Weight: 1650 kg.

#### 15/028

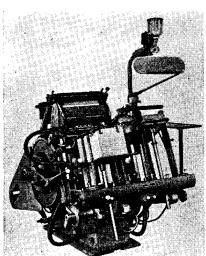
Model of a Complete Footwear Factory

KOVO

#### GRAPHICAL MACHINES 16

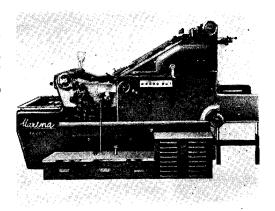
#### 16/029 **MAXIMA-FRONT**

high-speed Automatic Letterpress Machine. Paper size: 56×76 cm. Output: 3600 prints per hour. Three forme inkers. The printed sheet is taken over from the cylinders by spring loaded grippers.



#### 16/030 **GRAFOPRESS**

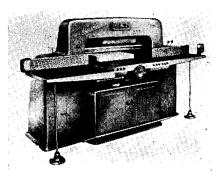
Automatic Platen Printing Machine, suitable for complicated multicoloured jobs. Paper size: 26×36 cm. Maximum output: 5000 prints per hour.



16/029

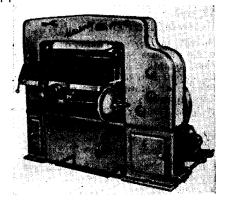
#### 16/031 **MAXIMA MH 106**

Hydraulic Paper Cutting Machine. The machine meets the highest requirements. Width of cut: 106 cm. Hydraulic



112

16/030



16/032

cutting and clamping device. Double push-button photo-electric safety control. Automatic strip cutting device.

KOVO

#### 16/<mark>032</mark> MAXIMA MH 78

Hydraulic High-Speed Guillotine. Hydraulic clamping and mechanical knife

motion. Double push-button safety control. Width of cut: 78 cm.

#### 16/033 MAXIMA-GUARDIAN

Disc Type Cleaner of matrices of linotype or intertype setting machines. Output: 1800 kg per hour. The cleaner increases the service life of type setting matrices and reduces manpower.

#### 16/034 Bench Type Line Saw

for accurate machining of type lines and typographic materials. Size of work table  $25\times25$  cm.

# 16/035 Type Setting Matrices and Wedges MAXIMA

"Brno Z" printing type in bold type and incised italics. Menhart Triga with italics. "Kolektiv" book printig type in bold type and italics. Novelty: Editorial type with bold type and italics. Wedges for type setting machines.

KOVO

# 17 BUILDING AND ROADMAKING MACHINES

#### 17/001 Road Roller NV 15 E

for building railway tracks, roadbeds and road embankments, gravelled roadways and airfields. It is provided with hand and hydraulic control. Roling width: 2400 mm. Working weight with counterweight: 15.000 to 18.000 kg. Škoda 4 S 110 engine. Average speed: 1.5 to 5.8 km./hr.

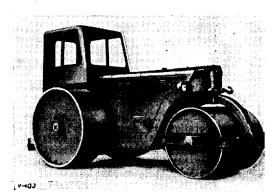
'STROJEXPORT

#### 17/002 Road Roller NV 10 E

for building railway tracks, roadbeds and road embankments, gravelled, tarred or asphalt roadways and airfields. Rolling width: 2050 mm. Working weight with counterweight: 10.600—12.600 kg. Škoda 3 S Engine. Average speed: 1.5 to 4.5 km./hr.

STROJEXPORT

17/002



#### 17/003

#### **Glazing Machine**

The AGO type automatic glazing machine serves for glazing wall-tiles.

TECHNOEXPORT

#### Edge Mixer MiK 1500, dia. 1500

used for intense and periodical kneading of pulverised materials for the production of refractory bricks. The humidity of the processed materials must not exceed 15 p. c.

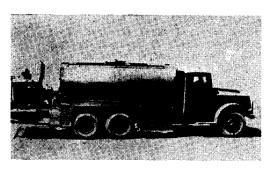
#### Worm Press LŠ-355-1

used for moulding drawn ceramic mouldings of brick-clay.

STROJEXPORT

# 17/004 Model of a Ceramic Factory

TECHNOEXPORT



17/005

#### 17/005 Bitumen Sprinkler

for sprinkling the roadbed with bitumen, tar or emulsion. Tank capacity: 7000 litres. Weight of empty truck: 13,000 kg. STROJEXPORT

#### 17/006

## Concrete Mixer, 100 cu. metres per hour

Especially designed for continuous operation in construction plants of large scale industrial undertakings, buildings and water development schemes. Maximum output: 120 cu. metres per hour. Weight: 7300 kg.

STROJEXPORT

#### 17/007

#### Concrete Mixer C 501

suitable for perfect mixing of the concrete mixture with an addition of a small quantity of water, such as for the production of prefabricated parts. Mobile or stationary type. Output: 8 cu. metres per hour. Input 6.5 kW. Weight: 3800 kg. STROJEXPORT

#### 17/008

#### Hollow Block Machine T 2

Output: 1000 to 1400 blocks per 8 hours. Input: 3 kW. Weight of the machine without compressor: 850 kg.

STROJEXPORT

#### Rope Conveyor LT 1

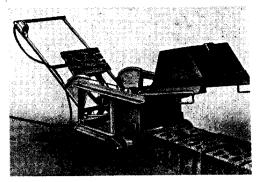
for use with the hollow block press. It serves for conveying raw hollow blocks to drying chambers. Input: 0.4 kW. Weight: 800 kg.

STROJEXPORT

#### 17/009

## Mortar Pump and Plastering Machine OB 4

New, improved design. Output: 60 sq. metres per hour. Input: 3 kW. Weight of the pump without hose and compressor: 730 kg. STROJEXPORT



17/010

#### 17/010 Hand Hollow Block Machine RT 1

for the production of hollow blocks and prefabricated parts from light materials on a small scale. Daily output of one operator: 400 to 500 pces. Weight: 100 kg. STROJEXPORT

#### 17/011 Vibrating Screen VSM 1

for the removal of coarse grains in mortar. Weight: 150 kg.

STROJEXPORT

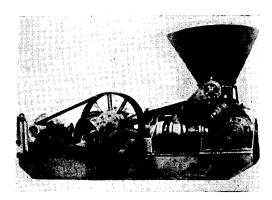


17/013 Structure Steel Bending Machine OS 41

for bending structure steel, 40 mm. in dia. on building sites. Weight: 1000 kg. STROJEXPORT

#### 17/014 Sectional Transporter DD 650/50

used for conveying sand and other loose materials. The sections are 1.5 metre long. Maximum output: 140 cu. metres per hour. Input: 7.5 kW. Weight: 4200 kg. STROJEXPORT

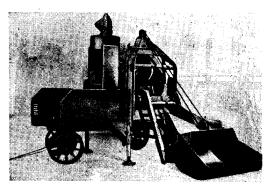


17/015 Concrete Pump CB 6

for conveying concrete mixture both vertically and in the horizontal plane.

Output: 6 cu. metres per hour. Input: 20 kW. Weight: 2800 kg.

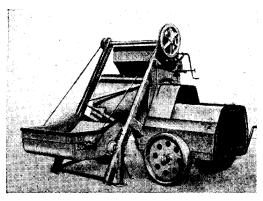
STROJEXPORT



17/016

#### 17/016 Concrete Mixer K 500

for mixing concrete mixture. Output with 15 mixtures: 7 cu. metres per hour. Input: 7.5 kW. Weight: 2950 kg. STROJEXPORT



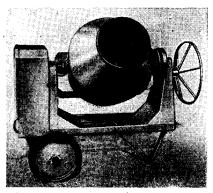
17/017

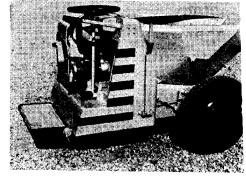
#### 17/017 Mortar Mixer MM 250

for mixing mortar in larger quantities. The machine has been designed on the principle of forced mixing. Output: 4 cu. metres per hour. Input: 4.4 kW. Weight: 1500 kg. STROJEXPORT

115

17/015





17/018

17/023

#### 17/018 Mobile Concrete Mixer H 65

for small indoor jobs and repairs. Output: 1 cu. metre per hour. Input: 0.8 kW. Weight: 366 kg. STROJEXPORT

#### 17/019 Concrete Mixer K 250

for mixing concrete on smaller building sites. Semi-automatic control. Output: 4 cu. metres per hour. Input: 4.2 kW. Weight: 1500 kg. STROJEXPORT

#### 17/020 Pneumatic Ram PB 200

The ram serves for driving piles, 6 to 7 metres long and 150 to 250 mm. in diameter, into the bed of a river or soft, marshy ground as support for the foundations of a building or bridge. Air consumption: 0.8 to 0.9 cu. metre per min. Overall weight with accessories: 245 kg. STROJEXPORT

#### 17/021 Ram DB 45

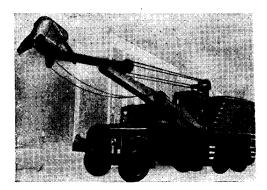
for driving piles into earth as support for the foundations of a building or bridge.

STROJEXPORT

#### 17/023 Power Buggy MV 250

for transportation of sand, loose materials or liquids in a box which can be replaced by a platform of 500 kg. carrying capacity. The buggy is driven by a double-stroke petrol engine. Capacity of the box: 250 litres, heaped 350 litres. Weight: 380 kg.

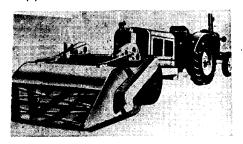
STROJEXPORT



17/024

#### 17/024 Power Shovel D 030

mounted on the chassis of the Tatra 111 truck. The excavator is driven by an intependent Skoda oil engine. The individual mechanism can be replaced by various attachments. Shovel capacity. 0.35 cu. metre. Weight: 17,500 kg. STROJEXPORT



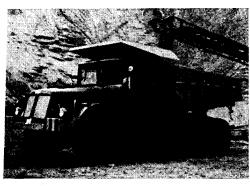
17/025

#### 17/025 Soil Cutter PF 1900

for loosening and aerating soil or mixing materials in building roads and airfields. The machine is driven by an air-cooled oil engine. Weight: 3615 kg. STROJEXPORT

#### Zetor Super Wheel Tractor

is recommended for hauling the soil cutter. MOTOKOV

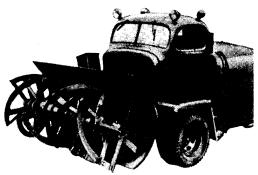


17/026

#### 17/026 Dumpear DC 5

for transportation of earth on building sites. The box which is mounted on the chassis of the Tatra 111 truck, has a capacity of 5 cu. metres or 6 to 7 cu. metres if piled. Hydraulic tipping mechanism. Weight: 9600 kg.

MOTOKOV



17/028

17/029

#### 17/028 Snow Plough SF

intended for removing snow drifts from roads and airfields. The snow is blown off by ventilators up to a distance of 30 metres. Weight: 8100 kg.

STROJEXPORT



#### 17/029 Grader PRAGA T S-6

used in road building and gravelling, surface dressing, building of embankments and slopes. STROJEXPORT

#### 17/030 Model of A Building Site

On the building site are models of excavators RY 1, locomotives and road rollers.

STROJEXPORT

#### 17/031 Tank VLH, 10 T

used for transportation of pulverised bulk materials, such as cement. Provided with overpressure discharging equipment. Capacity: 10 tons. Weight: 10,500 kg. STROJEXPORT

# 17/032 Truck for Loose Pulverised Materials with Overpressure Discharging Equipment

for transportation of pulverised bulk materials, such as cement. Overpressure discharging equipment. Capacity: 40 tons. Weight: 32,600 kg.

STROJEXPORT

# 17/033 Bulk Cement Reloading Station

for reloading bulk cement from special railway trucks to road trucks or other conveying equipment. STROJEXPORT

# 17/034 Zetor Super Crawler Type Tractor with Share

for surface dressing and forestry jobs, such as road building in forests, etc. Weight with share: 4800 kg. MOTOKOV

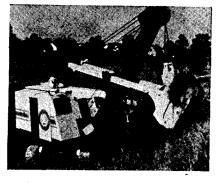


17/035

#### 17/035 Universal Excavator with Dragline E 25

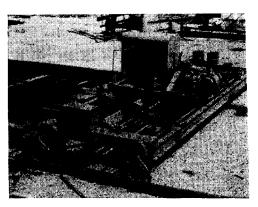
Shovel capacity: 2.5 cu. metres. Input: 210 kW. Weight: 105,000 kg.

STROJEXPORT



17/036 17/036 Universal Shovel Excavator D 500

Drive by means of an oil engine. Shovel capacity: 0.5 cu. metre. Weight: 21.500 kg. STROJEXPORT



17/037

17/037 Concrete Finisher FB 7.5

for building roads and airfields. Adjustable to three working widths. Drive by means of the Škoda 2 S 110 oil engine. Maximum working width: 7.5 metres. Weight: 7000 kg. STROJEXPORT

#### 17/039 Cement Spreader

This cement truck attachment serves for accurate proportioning of cement in building roadbeds. Quantity of spread cement: 6 to 30 kg./sq. metre. Spread width: 2 metres. Weight: 700 kg.

STROJEXPORT

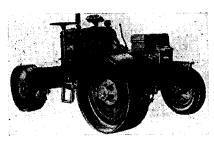


17/040

#### 17/040 Automatic Sweeper ZSI-T 805

serves for sweeping streets, factory yards, bays, etc. Mounted to the T 805 motor truck chassis. The sweeping roller behind the rear wheels delivers the impurities into a collecting tank. Width of sweeped trip: 2 to 2.4 metres. Weight of empty car: 3100 kg.

STROJEXPORT



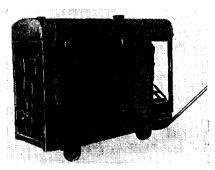
17/041

#### 17/041 Highway Strip Widening Roller

used for surface dressing of strips in widening roads, curbs, gutters and sidewalks. Drive by means of an oil engine. Output: 20 H. P. Weight: \$TROJEXPORT

#### 17/043 Concrete Pump CB 12

used for conveying concrete on large building sites. Output: 12 cu. metres per hour. Input: 36 kW. Weight: 3000 kg. STROJEXPORT



17/044

#### 17/044 Hot-Air Generating Set

used for heating and drying of buildings with hot air and flow heating of water for the production of mortar and concrete in winter. Thermal output: 120,000 Kcal/hour. Input: 4 kW. Weight: 920 kg.

STROJEXPORT

#### 17/045 Concrete Mixer KM 10

for continuous production of concrete. The machine which is mounted on a two-wheel undercarriage can be hooked to any vehicle. Output: 10 cu. metres per hour. Input: 5.5 kW. Weight: 980 kg.

STROJEXPORT

#### 17/046 Continuous Weighing Equipment

for weighing fractions of cement during continuous mixing in large cement factories. This equipment is also suitable for continuous weighing during various chemical processes. Output: 50 tons per hour. Input: 1.2 kW. Weight: 1000 kg. STROJEXPORT

# 17/047 Tank for Cement Spreader

mounted on T 111 chassis. Also suitable for bulk cement. The tank is discharged by rippling. Capacity: 9.5 cu. metres. Weight: 9300 kg.

STROJEXPORT

#### 17/048

#### Hydraulic Vibration Press for the production of hollow blocks,

boards and various parts of concrete, dross and other building materials. Output: 480 hollow block per hour. Input: 17 kW. Weight: 5 tons.

STROJEXPORT

#### 17/049 Vertical Stationary Cutter of Refractory Materials SVF 1

for handling ashlars of refractory materials and stones of minor toughness. Maximum dimensions of worked ashlar: 1600×1000×300 mm. Input: 25 kW. Weight: 6500 kg. TECHNOEXPORT

#### 17/050

Model of a Line for the Production of Longitudinal Parts
STROJEXPORT

#### 17/051

#### Single Axle Tractor T 180

finds use with TV 10 off-road trailer scraper, etc. Tatra 111 oil engine. Weight: 7500 kg. STROJEXPORT

#### 17/052 Off-Road Trailer TV 10

for use with T 180 single-axle tractor. Geometrical capacity: 10 cu. metres, heaped: 12.5 cu. metres. Side-wall discharging. Weight: 10,500 kg.

STROJEXPORT

#### 17/053 Mammoth Vibrator OV 1

for solidification of dams, etc. Weight of the machine, complete: 20,000 kg.

STROJEXPORT

#### 17/054 Gantry Crane GO $2\times5$ T

The lift of the crane is effected by means of two detachable winches, driven by 14 kW electric motors and BMT 2/M electromagnets. When travelling, the crane is also operated by two 14 kW electric motors. Capacity  $2\times 5$  tons. Maximum lift: 25,000 mm. Travelling speed: 31 metres per min. Speed

of lift: 5 metres per min. Weight without rails: 51.9 tons.

STROJEXPORT

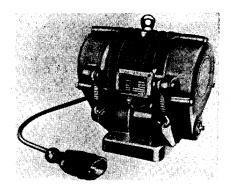
#### 17/055

Aluminium Semi-Gantry Crane STROJEXPORT

#### 17/059 High-Speed Elevator RV 600

serves for conveying materials in building houses, chimney-stacks, etc. It is adapted for the transportation of buckets, wheelbarrows, stone, etc. Capacity: 600 kg. Motor input: 8 kW. Weight including guiding: 1900 kg.

STROJEXPORT

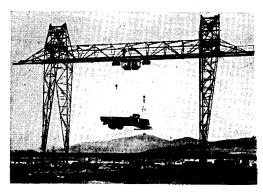


#### **17/060** 17/060 Surface Vibrator EVU 250 A

finds a wide field of application in the building trade, chemical, food-stuffs or metallurgical industries. Input: 0.25 kW. Weight: 40 kg.

STROJEXPORT

17/054





# THE OLDEST AIRLINE IN THE WORLD — A GUARANTEE OF RELIABILITY AND GOOD SERVICE

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# TECHNICAL JOURNALS OF





**AUTOMOBIL** THE AUTOMOBILE New technical monthly for those in-tested in the progressive design and production of automobiles, motorcycles and tractores.

ELEKTROTECHNICKÝ OBZOR ELECTRICAL ENGINEERING REVIEW

Scientificand technical monthly dealing with power current electrotechnics.

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supply information on science and technology from home and abroad



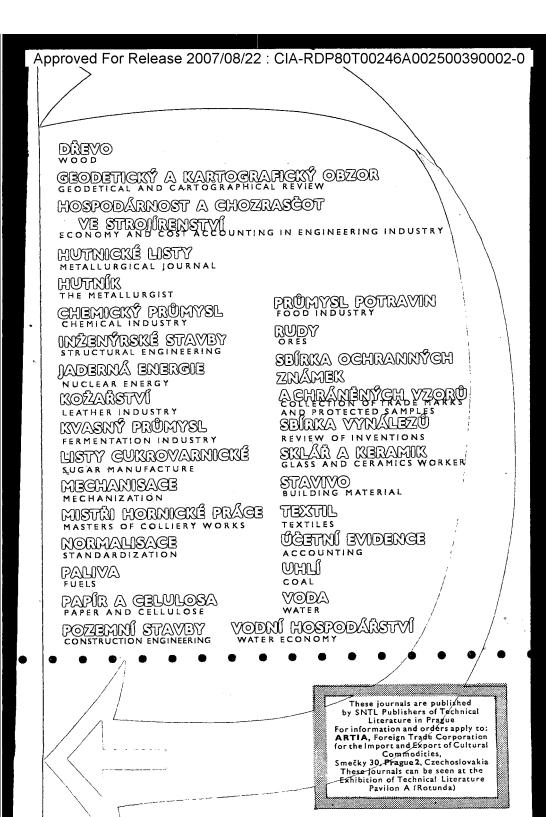
present progressive working methods



form a platform for the exchange of working results



review new technical books and journals





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20 Milliard dinars of business transacted

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INFORMATION:

NOVOSADSKI SAJAM, NOVI SAD (YUGOSLAVIA)

Telephone: 21-98, 36-20, 43-05 Telegrams: SAJAM NOVI SAD

#### Surface Vibrator EVU 500

Same application as of 250 A EVU vibrator. Input: 1.1 kW. Weight: 65 kg. STROJEXPORT

#### Surface Vibrator EVU 1000

Application as above. Input: 2.4 kW. Weight: 96 kg. STROJEXPORT

#### 17/061 Immersion Vibrators PV 200 A

for vibrating smaller quantities of concrete. Also suitable for vibrating structures with steel strutts and high buildings. Input: 0.5 kW. Weight with accessories: 25 kg. STROJEXPORT

#### Immersion Vibrator PV 500 A

Same application as of PV 200 A vibrator Input: 1.6 kW. Weight with accessories: 73 kg. STROJEXPORT

#### 17/063

#### Universal Shovel Excavator D 100

A new type and design of a hydraulic dredger. Shovel capacity: 1 cu. metre.

#### 17/064 Crushing Set DS 20

A complete mobile crushing set.

#### 17/065

Rotary Valve Cement Packing Machine

#### 17/066

Model of a Cement Factory

#### 17/067 Mortar Pump CM 6

for pumping mortar both vertically and in the horizontal plane. Output: 6 cu. metres per hour. Input: 7 kW. Weight: 680 kg. STROJEXPORT

#### 17/068 Locomotive BNK 30

Narrow gauge locomotive with oil engine for use in industrial plants. Gauge: 500 to 800 mm. Tractive force on hook: 1140 kg. Output: 30 H. P. Weight: 5400 kg. STROJEXPORT

### 17/070 Pneumatic Concrete Pump

for concreting in mines, tunnels, etc. Tank capacity 370 litres, transport time of one charge 30—60 seconds. Length of of the delivery pipes up to 60 metres.

The periodical

### CZECHOSLOVAK FOREIGN TRADE

supplies information on the export products of all the sectors of the Czechoslovak industry. Reports on fairs and exhibitions, reports on trade policy and foreign press comments, supplement the contents of the richly illustrated periodical, issued six times annually in English, German, Russian, Spanish, Portuguese and French.

#### 18 CONVEYING EQUIPMENT

#### 18/001 Travelling Conveyor with Rubber Belt

The conveyor is used for conveying loose materials on building sites, and piece goods up to 10 kg in weight at a shorter distance and higher delivery height.

STROJEXPORT

#### 18/002 Bucket Elevator

intended for vertical transportation of loose materials. It consists of buckets, fitted to an endless rubber belt or chain. Speed of bucket: 1,15 metre per sec. Output 50 cu. metres per hour. STROJEXPORT

#### 18/003 Mechanical Shovel with Double Hopper, Type MLP 2

used for transporting large quantities of materials, such as coal, coal-dust, sand, grain and lumps of coal up to 60 mm. in dia. Output: 20 to 40 cu. metres per hour. Maximum working range: 15 metres. STROJEXPORT

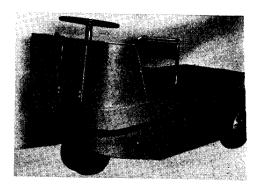
#### 18/004 Loader, Type Brom

intended for loading trucks with non-abrasive loose materials up to 60 mm. (light and crushable materials) or 50 mm. in granulation (heavy materials at a lower output) and loosened earth from heaps. Output: 50 to 80 cu. metres per hour. Forward travelling speed: 8.5 km./hr. or 2.4 metres per sec. STROJEXPORT

#### 18/005 Resonance Conveyor

used for transportation of loose materials, such us moulding sand, steel chips, agglomerated sinter, ores, salpetre, etc. Output: up to 40 cu. metres per hour.

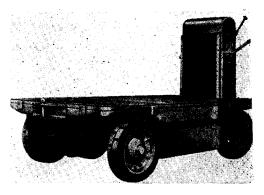
STROJEXPORT



18/008

## 18/008 Battery Tractor, Type AT 1521

used for transportation by means of trailers. It finds use in railway-stations, harbours, industrial plants and wherever trailers are preferred to other means of transport. Trailer loading capacity: 1500 kg. STROJEXPORT



18/009

#### 18/009 Platform Battery Truck, Type AP 522

This efficient vehicle is used for local transportation of all kinds of materials and goods in industrial plants, warehouses, railway-stations, harbours, etc. It is fast, very mobile, easy to manoeuvre, cheap in operation and maintenance and therefore economical. Rated capacity: 500 kg. STROJEXPORT

#### 18/01'0 Platform Battery Truck, Type AP 1522

This efficient vehicle is used for local transportation of all kinds of materials and goods in industrial plants, warehouses, railway-stations, harbours, etc. It is fast, easy to manoeuvre, cheap in operation and maintenance and therefore economical. Rated capacity: 1500 kg.

TECHNOEXPORT

#### 18/011 Electric Battery Pedestrian Hand Operated Truck with Low Lifting Platform, Type ANR 511

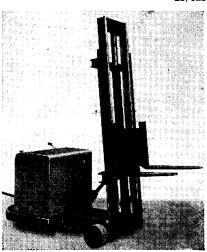
This vehicle which is provided with its own drive, serves for conveying various kinds of materials and goods. The operator does not stand on the truck but he walks by, guiding the truck by the shaft. Rated capacity: 500 kg. Lift: 140 mm.

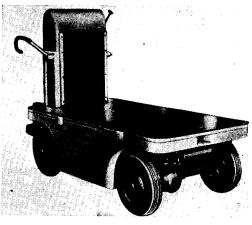
STROJEXPORT

#### 18/012 Low Lift Electric Battery Truck, Type AN 1522

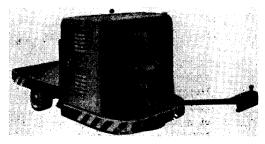
used for conveying all kinds of materials, goods, semi-products or finished products or specially adapted platforms or stands, in cases or vessels. Rated capacity: 1500 kg. Lift: 140 mm. STROJEXPORT



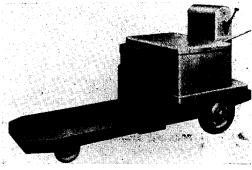




18/010



18/011



18/012

# 18/013 Electric Battery Pedestrian Hand Operated Truck AVR 511

with high lifting forks and own drive. The operator guides the truck by its shaft. Rated capacity:  $500 \text{ kg. Lift:} \\ 3000 \text{ mm.}$ 

#### 18/014 High Lift Fork Electric Battery Truck, Type AV 1522

serves for transporting all kinds of materials and goods in warehouses and factories up to a lift of 3 metres. Rated capacity: 1500 kg. Lift: 3000 mm.

STROJEXPORT

#### 18/016 Petrol Driven High Lift Fork Truck, Type SV 1522

used for storing, loading, peletization or transportation of all kinds of goods and materials within short distances, especially in yards, well air-conditioned workshops, warehouses or on ramps. The operation of the petrol engine is not dependent on the length of the working shift. It is preferably used on sites where a charging station cannot be installed without difficulty. Rated capacity: 1500 kg. Speed: 15 km. per hour.

STROJEXPORT

# 18/017 Portable Conveyor with Rubber Belt

used independently or as a part of a conveying line in transporting small piece goods.

#### Portable Slat Conveyor

used for conveying bags, cases and various piece goods. STROJEXPORT

#### 18/018 Railway Wagon Shunter, Type 414

intended for shunting railway and other wagons on factory sites, sidings, rail-yards, etc.

STROJEXPORT

#### 18/020 Overhead Runway Conveyor, Type Teleflex 455

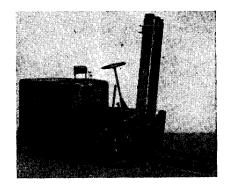
for conveying piece goods.

STROJEXPORT

#### 18/021 Flowroll Gravity Conveyor

used for an independent conveyance of piece goods, such as bags, cases, etc., or as a section element of linked track.

STROJEXPORT



18/014

#### 18/022 Worm Geared Chain Pulley Block,

Type K 50 - 1 ton
Weight: 24 kg. Approximate lift: 3 metres. Capacity: 0.5 ton. STROJEXPORT

#### 18/023 Brano Chain Pulley Block K 50 - 2 tons

Weight: 98 kg. Approximate lift: 3 metres. Capacity 2 tons. STROJEXPORT

#### 18/024 Spur Geared Chain Hoist, 3.2 tons

New type. The lifting mechanism is carried in bearings. Approximate lift: 3 metres. Weight: 70 kg. Capacity: 3.2 tons. STROJEXPORT

#### 18/025 Brano Pull Lift, 2 T

Weight: 22 kg. Lift: 1.35 metre. Capacity: 2 tons. STROJEXPORT

# 18/026 Brano All Steel Lifting Jack, Type Z 20-5t

Weight: 21 kg. Lift: 400 mm. Capacity: 5 tons. STROJEXPORT

#### 18/027 Hydraulic Jack, Type CHZS - 25 t

with oil filling. Weight: 46 kg. Lift: 145 mm. Capacity: 25 tons.

STROJEXPORT

#### 18/028

#### Low Lift Truck, Type NZV 1200

designed for use on factory sites and store-yards for loading or discharging all types of trucks, etc. Capacity: 1200 kg. Lift: 125 mm. STROJEXPORT

#### 18/029

#### Suspended Conveyor with Moving Rope, Type VZV 600

used for lifting and conveying goods in industrial establishments, warehouses, depots as well as for loading railwayand motor-trucks. Capacity: 600 kg. Lift: 1400 mm. Weight: 250 kg.

STROJEXPORT

#### 18/030

#### Hoisting Platform, Type MSP 350

used in the construction of locomotives, boilers, turbines, heavy machine tools, airplanes, etc. Carrying capacity: 350 kg. Lift: 1500 mm. Weight: 470 kg. STROJEXPORT

### 18/031

#### Hoisting Platform, Type MP 1500

serves for short distance transportation and handling of loads up to 1500 kg. in weight. Also suitable for handling pressings, heavy fixtures, etc.

STROJEXPORT

#### 18/032 Hand Crane RPJ 600

serves for lifting and short distance transportation of loads on straight and hard roads, in industrial plants, warehouses, depots, repairshops, etc. Carrying capacity: 630 kg. Lift: 1500 mm. STROJEXPORT

#### 18/034 Palette I

used for conveying or storing of piece goods or loose materials in bags, cases, cartons, etc. Maximum carrying capacity: 1000 kg. Weight: 30 kg.

STROJEXPORT

#### 18/035

#### Overhead Travelling Crane 50/8 t

Remote controlled with short-wave transmitter. Main lift capacity: 50 tons. Auxiliary lift capacity: 8 tons. The crane is intended for carrying heavy loads.

STROJEXPORT

#### 18/036

#### **Typified Crabs**

of 5, 12 or 32 ton capacities, for use with overhead travelling cranes.

STROJEXPORT



18/037

#### 18/037 Mobile Crane HSC 4

designed for lifting and carrying loads up to 4,000 kg. in weight. Span: 6 metres. The crane is mounted on the undercarriage of the Tatra 111 truck. Capacity at a span of 6 metres, 4000 kg, 8,5 metres, 2500 kg. Weight: 11,500 kg.

#### 18/038 Building Crane SJ 16

suitable for a vertical conveyance of loads on building sites, store yards, etc. It consists of a bogie, column, jib, revolving frame, moving mechanisms, mobile counterweight and a pulley block with steel ropes. Capacity: 1000 kg, 2500 kg. Span: 16 metres, 6.4 metres. Lift: 16.5 metres, 29.3 metres. Weight of crane: at. 16 tons. STROJEXPORT

# 18/039 Model of Earth Moving Machinery for large earth moving jobs

It consists of 1 type D 400 excavator, 1 two-section long distance belt conveyor, 2 belt conveyor spreaders. Output: 580 cu. metres of compact soil per hour.

TECHNOEXPORT

#### 18/040 Mechanical Shovel, Type MLP 1

serves for discharging or loading all types of loose materials up to 50 to 60 mm. in dia. It is supplied, if required, with hoppers for conveying materials or a hopper for discharging railway-trucks.

STROJEXPORT

#### 18/041 Mechanical Shovel MLS 1

This stationary mechanical shovel serves for conveying large quantities of materials, such as small-sized coal, coaldust, sand or grain. Output: 10 to 25 cu. metres per hour. Weight: 306 kg.

STROJEXPORT

#### 18/042 Special Adjustable Disc Type Feeder, diameter 1000

used for uniform feeding of heavy soil to the next conveyor. STROJEXPORT

#### 18/043 20 ton Trailer

designed for transportation of heavy building machines on roads, and heavy loads in general. Capacity: 20 tons. Loaded area: 5000×2880 mm. Permissible speed with a fully loaded trailer: 40 km./hr. STROJEXPORT

#### 18/044 "Orlík" Concrete Bucket

with pneumatic drive of closing devices, used for concreting the Orlík dam. Ca-

pacity: 20 tons. Span: 695 metres. Cubature: 6.5 metres. STROJEXPORT

#### 18/045

Set of Dust-Proof Apparatus for the Removal of Fly-Ash, Type TRA - IV

designed for hydraulic conveyance of fly-ash from boilers and separators to floating channels. STROJEXPORT

## 18/046 Set of Roller Sections

The roller sections are a substantial part of a belt conveyor. The displayed roller sections are of light, heavy and self-adjustable type.

#### 18/048 Sectional Wheel Conveyor KD 2000

finds a wide field of application on factory sites, in warehouses, in loading and discharging railway- or motortrucks, etc. Capacity: 100 kg. Length of section: 2000 m. Width of crossbar: 550 mm. STROJEXPORT

## 18/163 R-1 Electric Pulley Block

For smooth vertical transport of loads up to 250 kg or 550 lbs weight. With monkey carriage attachment suitable also for horizontal transport in workshops and storerooms; advantageous for building and maintenance purposes. Weight 42 kg or 92.48 lbs.

STROJEXPORT

# 19 FOOD-MAKING MACHINES AND REFRIGERATING TECHNIQUE

#### 19/001 RAPID Beat Cutting Press

The machine removes excessive water from lixiviated beet cuttings by pressing them in a cylindrical strainer. By means of a revolving spindle the cuttings are pressed and water is extracted. Capacity: 3000 to 4000 q. of beet per 24 hours.

TECHNOEXPORT

#### 19/002 Suspended Beet Cutter

The cutter cuts washed beet into cuttings, suitable for the extraction of diffusion juice. The sugar beet in the hopper basket is pressed by its own weight to the knives which are fixed in 16 knife holders. Capacity: 650 to 1050 tons per 24 hours.

TECHNOEXPORT

### 19/003 Brewhouse

of a development test brewery. The pans which are made of steel or copper, are designed for an output of 80, 100 or 160 hectolitres. Double steam or fire heated pans have a capacity of 200 or 250 hectolitres. TECHNOEXPORT

# 19/004 Design of the Brewery at Topolčany

**TECHNOEXPORT** 



The machine which is provided with 1000/250/250 rollers, is intended for the grinding of all kinds of cereals, maize, sugar, salt, spices and chemicals.

TECHNOEXPORT

### 19/006 Laboratory Sifter

The machine checks the granulation of flour products and chemicals. By sifting 100 gramme samples the percentages of the various flour grades according to the size of grain, are ascertained.

TECHNOEXPORT

### 19/007 Automatic Meat Mincing Machine, Model 112

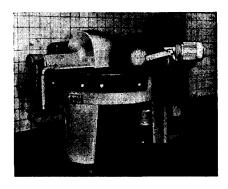
Capacity: 1200 to 2000 kg. of minced meat per hour. Automatic feeding. The machine finds use in large butcher's or sausage-maker's shops. It works independently or in combination with other machines.

• MOTOKOV

# 19/008 Electric Bowl Meat Cutter, Model 127

with automatic emptying of the bowl. The machine is intended for large scale production of minced meat. Capacity of the bowl: 200 litres. Hygienic operation.

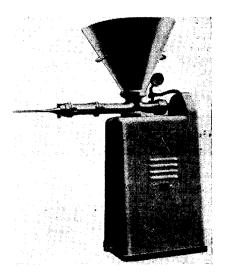
MOTOKOV



19/008

### 19/009 Vacuum Sausage Filling Machine, Model 157

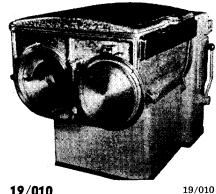
for continuous operation. The machine is intended for the filling of all sorts



19/009

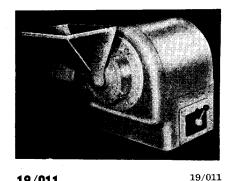
of sausages. It operates independently or in combination with other machines. The machine improves the quality of the products by 30 p. c.

MOTOKOV



### 19/010 Automatic Mixing Machine, Model 143

The machine which has a capacity of 250 litres, is enclosed in a transparent jar which permits the observation of the working process. The mixed material is automatically discharged by opening the side plug during the rotation of the screw paddles. MOTOKOV



### 19/011 Disintegrator 131

The machine is used for the production of sausage-meat from fine chopped meat from boiled skins, tough meat and hash for liver sausages and pies, as well as for mincing fish and the preparation of hash for fish-pies. Approximate output: 3000 kg per hour.

MOTOKOV

19/012 Meat Mincing Machine, Model 100 A

Diameter of cutting head: 82 mm. A spice grinding mill can be fitted to

the projecting end of the worm, and tightened by means of a flange.

MOTOKOV

#### 19/Q13

### Meat Cutter, Model 122 A

Bowl capacity: 45 litres. The machine is suitable for small butcher's shops. The machine is equipped with safety devices.

MOTOKOV

### 19/014

### Meat Mixer, Model 147

Capacity of the mixing tub: 50 litres. The machine is designed for mixing hash by means of screw paddles. It provides an extremely easy operation, and finds use in small shops.

MOTOKOV

### 19/015

### Blood Separator, Model ŠKG 03

The machine serves for separating the blood-plasma from blood-corpuscles. Capacity: 300 litres per hour. Weight: 300 kg. Speed of drum: 5800 r. p. m. STROJEXPORT

### 19/016 Milk Tank

Capacity: 500 litres. Diameter: 1210 mm. Height: 1160 mm. 0.25 kW electric motor. About two hours are required for cooling milk 30  $^{\rm 0}{\rm C}$  warm, to a temperature of + 10  $^{\rm 0}{\rm C}$ .

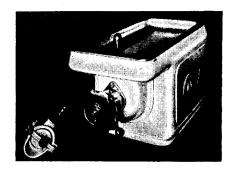
STROJEXPORT

#### 19/017 Automatic Milk Weigher, Model 34-0

With aluminium tank, divided into two parts of 250 litres each. Capacity: 500 kg. The weigher is sealed to prevent vapour from penetrating its mechanism.

STROJEXPORT

19/012



## 19/018

### Plate Type Milk and Cream Pasteurizer, Model PD 1000

Capacity: 10,000 litres per hour, i. e. 8500 litres of milk and 1500 litres of cream. Pasteurizing temperature of milk: 76 °C. Pasteurizing temperature of cream: 95 °C. The heated milk keeps its temperature for 35 seconds.

STROJEXPORT

### 19/019

### Cream Separator, Model SMF 5

The machine is intended for cream separation, milk egalisation and purification as well as for the separation of butter-milk and whey. Capacity: 5000 litres per hour. 5.5 kW electric motor. Weight: 586 kg. STROJEXPORT

### 19/020

#### Butter Churn, Model 4 MV 400

The machine is a part of continuous line for the production of butter from biologically ripened cream with a fat content of 38 to 42 p. c. Output: 330 to 430 kg. of butter per hour, according to the fat content of cream.

STROJEXPORT

### 19/021

#### **Stainless Butter Churn**

Capacity: 3000 litres. Weight: 2775 kg. STROJEXPORT

### 19/022

### Ripening Tank

The tank is designed for cream ripening and tempering prior to churning. Capacity: 3000 1.

### 19/023

### Automatic Forming and Packing Machine, Model 12 MV

The machine handles butter or vegetable fats. Number of packages per min.: 25 to 28 250 gramme cubes: 400 kg. per hour 125 gramme cubes: 200 kg. per hour.

### Carbonator - Filling Machine

The machine is designed for filling bottles saturated with carbon dioxide

(beer, soda-water, etc.), under pressure. Output: 9000 litres per hour: Input: 2.2 kW. Weight: 2800 kg STROJEXPORT

### 19/025 **Battery Vacuum Cistern VAC 40**

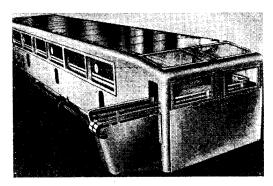
for the transportation of milk. Capacity: 400 litres.

MOTOKOV

## 19/026

#### Vacuum Cistern VAC 12

The vacuum cistern is designed for the transportation of milk into the dairy. Capacity: 1250 litres. Weight: 250 kg. MOTOKOV



19/027

### 19/027 Spray Cooler for Stewed Fruit CHL-15

serves for continuous cooling or pasteurizing, or the two processes combined. In the canning industry it is used for cooling stewed fruit after sterilization, while it is employed for pasteurization, cooling or a combination of the two processes in breweries, wine cellars and in cider production. Output: 1500 to 1800 1/1 kg. of stewed fruit bottles per hour, cooled down from 90°C to 30°C STROJEXPORT above zero.

### 19/028 **Electric Three Compartment Baking Cabinet**

MOTOKOV

### 19/033

### Plate Type Constant Freezer

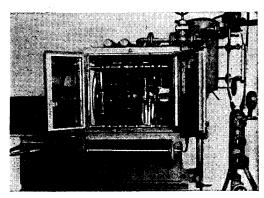
The machine which is based on direct evaporation of ammonia and the forced feed circulation system of the refrigerant, is designed for the production of chilled food and meat in lumps, 25 kg. in weight and 150 mm. in height. Period required for chilling packages:  $1\frac{1}{2}$  to  $2\frac{1}{2}$  hours according to the kind of goods. Meat: 5 hours. Approximate weight: 4800 kg; weight of meat filling: 900 kg.

MOTOKOV

### 19/034

### Refrigerating Piston Compressor

The compressor is used for compressing the vapours of the refrigerant, i. e. of ammonia (NH<sub>3</sub>) or freon 12 (CCL<sub>2</sub>F<sub>2</sub>). Speed: 960 r. p. m. MOTOKOV



### 19/037

### Freon Condensing Units

The units are provided with V series water-cooled condensers, and use freon F 12 as a refrigerant. They are of two-or four-cylinder type, with pistons and

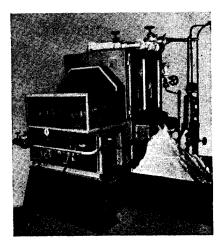
enclosed crank case.

Туре	V 421	V 540	V 68	V 7175
Output in kcal p. h Net weight in kg.	2100 160	4000 270	8000 470	17500 <b>790</b>
		MOTOKOV		

### 19/038

# Refrigerator Show Case for Self-Service CVSd 630

suitable for shops with self-service. Plastics and all modern design features find a wide field of application in this type of refrigerator. Useful capacity: 630 litres. Size: 2.5 sq.metres.



19/035

### 19/035 Crushed Ice Plant

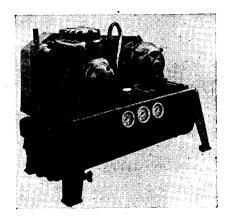
Maximum capacity: 270 kg. per hour. The plant is connected to an ammonia or freon refrigerating circuit (generating set). The briquette-making attachment moulds the crushed ice into briquettes.

MOTOKOV

# 19/036 Automatic Multiple Production Parts

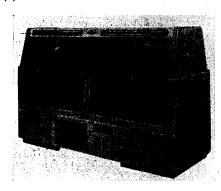
 $\begin{array}{c} \textbf{used with refrigerating equipment.} \\ \textbf{MOTOKOV} \end{array}$ 

19/037



130

19/035



# Double Refrigerator Show Case for Self-Service MVSd

for use in shops with chilled meat, fish, poultry, vegetables, fruit, etc. Show case temperature: 5 to  $10\,^{\circ}\mathrm{C}$  below zero. Temperature in the bottom part: 15 to  $18\,^{\circ}\mathrm{C}$  below zero. Useful capacity: 480 litres: Size: 1.5 sq. metre. MOTOKOV

# 19/039 Refrigerating and Chilling Trailer PM 34

for long distance road-transportation of chilled goods. The temperature which can be adjusted to 20 °C below zero (at a maximum ambient temperature of 27 °C), is automatically maintained with an accuracy of plus minus 2 °C. Cooling space capacity: 34 cu. metres, 17.9 sq. metres. Approximate weight: 19,400 kg.

MOTOKOV

### 19/040 Automatic Electric Regrigerator SA 900

Plastics enter in the construction of this refrigerator of entirely new design. Capacity: 900 litres. Cooling space: 1.8 sq. metre.

MOTOKOV

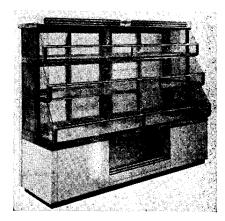
# **19/041 Display Counter CS 630**

This new type of display counter finds use in shops, kitchens, etc. It is used for cooling all kinds of food and beverages. Outer dimensions: Length 2160 mm, width 850 mm, height 920 mm. Capacity: 490 litres. Cooling space: 5 sq. metres.

\*\*MOTOKOV\*\*

### Wall-Mounted Refrigerator Show Case for Self-Service MVS 900

for use in self-service shops. Capacity of refrigerator crates: 900 litres. Size: 3 sq. metres. MOTOKOV



### 19/042 Hermetic Condensing Unit, M Series

This air-cooled (air-compressor cooled) unit uses freon F 12 as refrigerant. In combination with the respective refrigerator and regulating instruments, it is used with automatic electric refrigerators. It is suitable for refrigerator cases, smaller cooling chambers, walk-in coolers and special refrigeration equipment. Maximum capacity: 2000 kcal. per hour. MOTOKOV

### 19/043 Walk-in Cooler

MOTOKOV

### 19/044

Universal Mixing and Kneading Machine, Type "S 2"

The machine mixes and kneads dough and whisks eggs, cream, mashed potatoes, etc. It is suitable for kitchens catering for 500 people. By means of auxiliary attachments it is possible to use the machine for coffee or poppy-seed grinding, meat mincing, cutting, grating or straining.

MOTOKOV

### 19/045

### Potato Peeling Machine KŠP 180

The machine eliminates the hardest kitchen job and provides important economies in manpower. It is also suitable for handling various vegetables, such as carrots, turnips, cellery and other tuberous produce. This type of machine has a capacity of 180 kg, per hour. The KŠP 400 type machine has a capacity of 400 kg. per hour. MOTOKOV

#### 19/046

"Calex" Electric Compressor Refrigerator of 100 or 200 litre capacity MOTOKOV

### 19/047 ELEKTROSVIT Absorption Refrigerator

The refrigerator is provided with an absorption diffusion refrigerating set with continuous circulation. A mixture of ammonia, water and hydrogen is used as refrigerant. At a low temperature ammonia evaporates in the evaporator, absorbing heat and cooling down the surroundings.

MOTOKOV

#### 19/049

### Thermo-Case TB 20

The thermo-case is an independent portable unit, designed for transporting or storing of transfusion blood at a temperature of 2 up to  $4\,^{\circ}\mathrm{C}$  above zero, and maximum ambient temperature of  $25\,^{\circ}\mathrm{C}$  above zero. With icebags completely filled with fractional or crushed ice, the temperature is preserved for  $48\,$  hours. MOTOKOV

#### 19/050

### Mobile Crushed Ice Plant

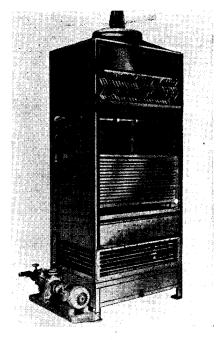
This ice plant of entirely new design is intended to produce large quantities of crushed ice. The ice is used in food, meat, chemical, pharmaceutical and textile industries. Output: 250 to 270 kg. of crushed ice per hour.

MOTOKOV

### 19/051

### Hypothermic Apparatus

The apparatus is designed to reduce the patient's temperature by means of an automatic or hand controlled freon cooling equipment. At a lower body



temperature the most difficult operations of the heart or other organs can be carried out.

MOTOKOV

#### 19/052

### Evaporative Condenser Unit

The unit is used for condensing the vapours of the refrigerant (freon 12) where water is not available. It provides a considerable economy in cooling water. Capacity: 17,000 kcal, per hour.

MOTOKOV

### 19/053

#### Oil Pressure Control Device

The device interrupts the operation of the refrigerating ammonia compressor when the overpressure of the lubricant drops below a given limit. MOTOKOV

#### 19/055

### Pressure Regulating Valve

The pressure regulating valve is inserted in the inlet ammonia piping in order to maintain a constant evaporating pressure in the evaporator. When the pressure rises, the valve opens, when the pressure drops, the valve closes. Weight: 7.5 kg. MOTOKOV

# 19/056 Suction Line Valve

for the control of suction lines of large evaporators. Weight 4.3 kg. MOTOKOV

### 19/057

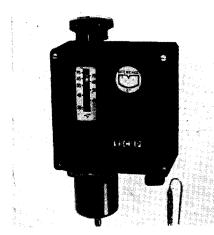
### Automatic Hydraulic Valve

The valve controls the water supply of a refrigerating condenser in relation to condensing pressure. Pressure range: 5 to 1? atm. Weight: 2.50 kg.

MOTOKOV

### 19/058 Overpressure Control Valve, Type PJA

The valve is designed to avoid overpressure in the high-pressure part of the ammonia refrigeration equipment. The operation is automatic. MOTOKOV



### 19/059-061 Room Thermostat, Type PT 1, PT 2, PT 3

The room thermostat is intended for automatic switching on or off of electrical equipment in relation to the ambient temperature. Weight: 1.45 kg.

MOTOKOV

19/059-061

### 19/062 Relief Valve JV 1 and JVA 1

The valve protects the refrigerating equipment against overpressure. When

the pressure rises, the valve opens and the refrigerant is released. Working pressure: 16 or 20 atm. MOTOKOV

### 19/063

### Fitche's Measuring Apparatus

for measuring thermal conductivity under unstable conditions. Weight: 60 kg. MOTOKOV

## 19/064 Diagrams and Pictures

of exported sugar mills.

TECHNOEXPORT

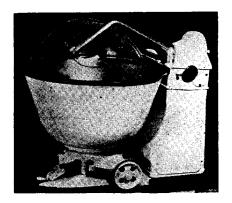
### 19/065

**Designs of Flour Mills** 

TECHNOEXPORT

### 19/066 Model of a Grain Silo

TECHNOEXPORT



# 19/067 Line for the Production of Pastry

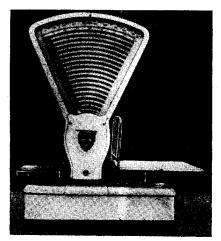
made of wheat-flour, such as buns, rolls, etc. The working process is automatic from the delivery of the risen dough into the hopper of the t-605 dough toughening machine down to the forming process. Output: 7200 pces.

STROJEXPORT

### 19/068 Bridge Scale 14-2

Capacity: 200 kg.

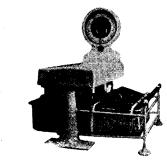
MOTOKOV



19/069

### 19/069 Bench Scale 13-4

Two scales. Capacity: 20 kg. MOTOKOV



19/070

### 19/070 Bridge Scale 14-0

Round dial. The scale is put on the table. Capacity: 30 or 50 kg.

MOTOKOV

### 19/072 Model of a Three-Floor Bakery STROJEXPORT

### 19/073 Continuous Pastry Forming Machine

The machine is a part of the pastry production line. STROJEXPORT

### 19/074 Walk-in Refrigerator

Capacity: 6 cu. metres. Useful working space: 2.7 sq. metres. Quantity of stored goods: 600 kg. MOTOKOV

### 19/082 Vibratory Separator for Precleaning

The separator is used for precleaning grain in granaries. Output: 32 tons of wheat or rye per hour. Width of screens: 1250 mm. STROJEXPORT

### 19/083 Cross Beating Mill SU 4

The high-speed cross beating mill is used for milling cereals, sugar, salt, saltpetre, wood-powder and various chemicals. Diameter of milling chamber: 600 mm. STROJEXPORT

#### 19/085

## Three-Cylinder Gutcasing Cleaning Machine, Model MH 191

The machine is designed for cleaning beef casings. Capacity: 40 to 60 casings per hour. Weight: 392 kg. MOTOKOV

#### 19/086

## Seven-Cylinder Gutcasing Cleaning Machine, Model MV-195

The machine cleans rapidly and precisely fine pork and mutton casings. All impurities, slime and grease are thoroughly removed, and the casings leave the machine thin and transpraent. Capacity: 700 pork casings per hour. 70 mutton casings per hour. Weight: 573 kg.

MOTOKOV

# 19/087 Band Type Machine for the Removal of Cherry Stems

The machine is designed for removing the stems of both fresh and tinned cherries. Output: 7 q. per hour. Weight 550 kg.

MOTOKOV

### 19/088 Bun Forming Machine PK 100

Maximum capacity: 10,000 buns per hour. Size of buns: 53 or 80 gr. Weight: 85 kg. MOTOKOV

### 19/089 Baking Plate Scraper

The machine is designed for cleaning and oiling baking plates with folded up edges. Maximum capacity: 1500 plates per hour. Width of plates (any length will do): 475 mm. Consumption of edible oil: 1 litre per hour. Weight: 520 kg.

MOTOKOV

### 19/090 Vegetable Slicer R 55

The machine serves for cutting hard vegetables into cubicles, strips or slices. Maximum capacity: 1500 kg. per hour. Weight: 263 kg.

MOTOKOV

### 19/091 Self-Priming Pump

The pump is designed for handling milk and milk products. All parts of the pump proper are tinned both inside and outside. Capacity: 10 000 litres per hour. Weight: 65 kg.

MOTOKOV

### 19/092

Automatic Weighing, Measuring and Registering Machine JOKA A-1

The machine is used for weighing or measuring of loose and granulated materials, liquids, etc. as well as for the control of machines which are technologically dependent on the weighed or measured quantities. The measured quantity can be charged in one lot or by instalments.

MOTOKOV

### 19/093 VULKAN Mixer, Type 430

The machine is used for mixing dough especially in large bakeries. Capacity of kneading-trough: 430 litres. Weight: 1700 kg.

MOTOKOV

# 19/094 Flour Sifting Machine KPM - I/3000

The machine is used in large installations for flour sifting, loosening, aerating and clod breaking as well as for removing all impurities. Weight: 450 kg. Output: 3000 kg. per hour. MOTOKOV

### 19/095 Small Flour Sifting Machine MPZ-I-300/2500

The machine is used for flour loosening, sifting and aerating or clod breaking. Output: 2500 kg. per hour. Weight: 550 kg. Weight with charged bin: 850 kg.

MOTOKOV

# 19/105 Milk Bottle Filling Apparatus

for smaller dairies. Fills five bottles at the same time when the foot pedal is depressed.

## Washing Device for cheese boards.

MOTOKOV

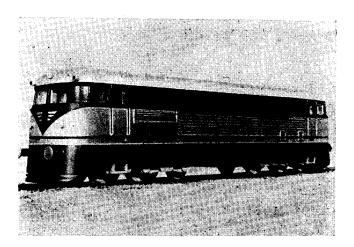
There are servicing depots with the greatest possible variety of spare parts in more than 120 states on the continent as well as overseas which is a guarantee of safe riding.

## 20 LOCOMOTIVES AND TRUCKS

### 20/001

#### Diesel-Hydraulic Locomotive

Output 400 H. P. 1435 CN 400. This Diesel locomotive is especially designed for shunting service in industrial plants. It can also be used on local lines for shunting and transportation of medium-heavy goods trains. Axle arrangement: 0-6-0. Gauge: 1435 mm. (4'8'/2"). Continuous rating: 410 H. P. at 1360 r. p. m. Maximum permissible speed: 25 km./hr. Weight of the locomotive in full trim: 48 tons.



### 20/002 Diesel-Electric Locomotive Co-Co, Output 1650 H. P. - T 698.0

The locomotive is intended for passenger express service at a maximum speed of 120 km./hr. or, with a modificated ratio, for goods service at a speed up to 85 km./hr. The Co-Co locomotive has six driving axles arranged in two bogies without pinions. All axles are driving axles. Axle arrangement: C-Co. Gauge: 1435—1676 mm. Continuous tractive force for passenger service: 13,850 kg. Continuous tractive force for goods service: 19,500 kg. Maximum rating: 1650 H. P. Weight of the locomotive in full trim: 105 tons.

STROJEXPORT

### 20/003

### Electric Locomotive 21E for Open Pits

The locomotive is designed for open pits; it consists of three parts, each part forming an independent power unit. Electropneumatic control. A special device permits the locomotive to be driven at a very low speed, and ensures a continuous loading of trucks under excavators: Axle arrangement: Bo+Bo-Bo. Overhead wire voltage: 1500~V~d.~c. Total output: 1560~kW. Maximum speed. 65 km./hr. tractive force: 45 tons. Total length of the locomotive: 21,000~mm. Minimum radius curvature: 60~metres. Overal weight: 150~tons. STROJEXPORT

### 20/004 Diesel-Electric Locomotive, Bo-Bo Type, Output 750 H. P. - T 435.0

The locomotive is intended for light and medium light shunting or goods service up to a maximum speed of 60 km./hr. It is suitable for passenger service if the heating of coaches from the locomotive is not required. It is provided with a device for train traction by means of two coupled locomotives from a single driver's post. Only two locomotives which are identical in design can be coupled. Axle arrangement: Bo-Bo. Gauge: 1435 mm. (4'8'/2") and 1678 mm (5'6"). Rating: 750 H. P. Tractive force at an adhesion coefficient of 0.25:14,000 kg. Weight of the locomotive in full trim: 59 tons.

### 20/005

### Four-Cylinder Vertical High-Speed Steam Engine 4 SP 260

The engine especially finds use in the food-industry, textile and paper mills, breweries, flax scouring mills and other plants where steam is used for heating purposes. Number of cylinders: 4. Maximum pressure of incoming steam with exhaust: 14 atm. Output at maximum pressure: 400 H. P. Speed: 600 r. p. m. Weight: 5.3 tons.

STROJEXPORT

#### 20/006

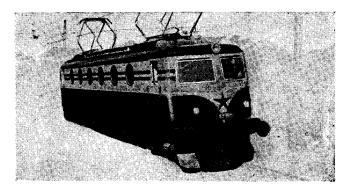
#### Eight-Wheel Express Coach without Compartment, Type Bai

The coach has fine, upholstered seats which can be revolved and tilted to meet the passengers' requirements. All seats are located in one compartment. The enlarged windows are firmly in-built, and air-circulation is ensured by forced ventilation. The coach is heated with hot water, supplied from a special electrical or steam exchanger. The appearence of the coach is enhanced by fluores:ent lighting and wall panelling in pastel shades. Length of coach over buffers: 23,500 mm. Number of seats: 64. Weight with bogies with guides: about 36.5 tons. Weight with bogies without guides: about 35 tons.

### 20/008 Eight-Wheel Hopper Balast Car Vsa

An open car with truck floor. Loose materials are discharged through flaps which are provided in the floor. Loading capacity: 57 tons. Length: 14,000 mm. STROJEXPORT

20/018



### 20/009

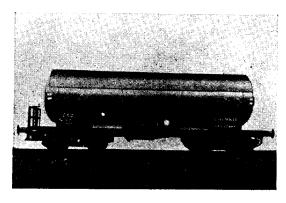
### Eight-Wheel Hopper Balast Car for Egypt

The car is used for transporting gravel, limestone, ores or sand. Loading capacity: 40 tons. Length 11,006 mm. STROJEXPORT

### 20/010 Eight-Wheel Universal Covered Truck, Type 1-420.1

The truck is especially designed for the transportation of grain or legumes; therefore, discharge chutes, provided with removable flaps, are built in the underframe. The truck is filled through charging flaps in the two side-walls and charging holes in the roof.

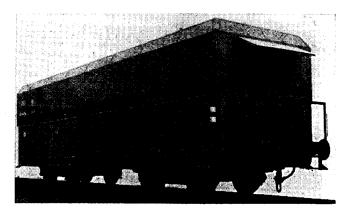
STROJEXPORT

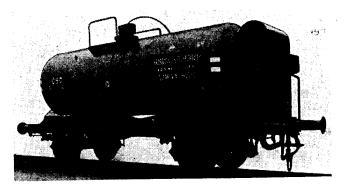


20/011

### 20/011 Eight-Wheel Tank Wagon, Capacity 560 hectolitres

This eight-wheel wagon of Ra series with a 560 hectolitre barrel, tested for 25 atm., is intended for the transportation of liquid ammonia and propane-butane. Working pressure at a maximum temperature of 40  $^{\circ}$ C 16 atm. The filling and discharging is carried out by means of valves, located on the bottom of the barrel where the dearating equipment is also provided. STROJEXPORT





20/012

### 20/012 Four-Wheel Tank Wagon, Capacity 240 hectolitres

A four-wheel tank wagon of R series with a barrel and a capacity of 240 hectolitres. The wagon is used for the transportation of thick oils and tars. For this purpose it is provided with a discharging device, 150 mm. in dia., cover heated drain pipes and a closing valve. The inside of the drum is equipped with heating elements having a heating surface of 21 sq. metres.

STROJEXPORT

### 20/013 Auxiliary DAKO D and DAKO CV Triple Valve

The DAKO CV triple valve is used with brakes of railway coaches and trucks. It meets the conditions of the International Railway Union (UIC) prescribed for air brakes. Together with the DAKO D auxiliary valve, the CV triple valve is suitable for braking loaded trucks.

STROJEXPORT

### 20/014 DAKO Brake Model Diamond Bogie

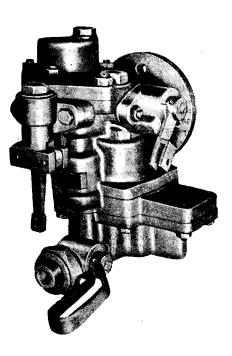
A high transmission speed of DAKO brakes of 288 metres per sec. ensures a smooth braking of the train. The brake which is almost inexhaustible, is characterized with an excellent resistance to overcharging. Its maintenance is easy.

STROJEXPORT

### 20/015 New Type Bogie for Railway Trucks

A bogie of welded construction for eight-wheel railway trucks. Suitable for speeds of 100 to 120 km/hr. Weight of bogie: 5000 kg. STROJEXPORT

20/013



### 20/016

### Model of an Eight-Wheel Motor Car of M 230.4 Series

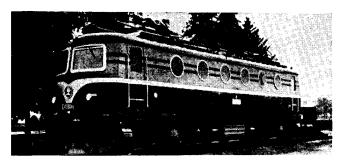
The car which is designed for local passenger traffic, is 18.5 metres long, 28 tons in weight and has 56 seats with a luggage compartment. Maximum speed 70 km/hr. It is driven by a horizontal, air-cooled, twelve-cylinder Tatra 1 930 KF Diesel-engine. The car is heated with hot air, and lighted by means of fluorescent tubes. Vans can be coupled to the motor car which are identical in design. STROJEXPORT

#### 20/017

#### Model of a Suburban Electric Four Car Unit

The unit is used for rapid passenger service on electrified lines in the vicinity of large cities. Length of the unit: 93 metres. Weight: 174 tons. Seating capacity: 308 seats and two luggage compartments. Maximum speed: 100 km/hr. Output: 8 traction motors, 1200 kW, overhead wire voltage of 3000 V. Each car is provided with a driving bogie, located at the same end as a pantograph.

STROJEXPORT



# 20/018 Electric Universal Overhead Wire Locomotive of E 499.0 Series

This locomotive is used with all kinds of trains. It has two bogies, and its own weight provides the adhesion weight. Electro-pneumatic control for a voltage of 48 V, pressure of 3.5 atm. Axle arrangement: Bo-Bo. Voltage: 3000 V. Maximum permissible speed: 120 km./hr. Output: 2344 kW per hour. Length of the locomotive: 15,800 mm. Adhesion weight: 80 tons.

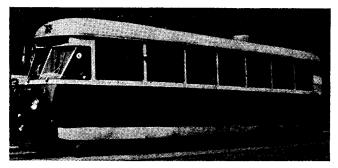
STROJEXPORT

### 20/019

### Trolley-Bus, Type 9Tr

This four-wheel trolley-bus has a self-supporting three-door body with transversal seats. The new bodywork is smaller in weight as compared with the old type. Panoramatic front and rear windows. Foreign excitation electric brake. Normal carrying capacity: 70 persons, maximum 100 persons. Maximum speed: 60 km./hr., standard 110 kW four-pole motor.

STROJEXPORT



### 21 SHIPS

### 21/001 Shaft Guide

# **21/002** Capstan

It consists of the propeller, pipe, propeller shaft, bushings and propeller cover. The shaft guide is made of POLDI EV 5 steel and non-ferrous metals.

\*\*TECHNOEXPORT\*\*

TECHNOEXPORT\*\*

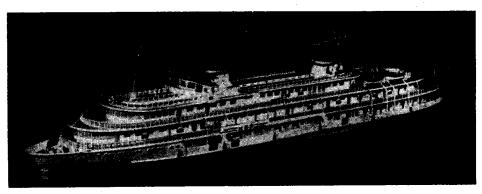
Electric drive with electro-magnetic or hand braking. TECHNOEXPORT

### 21/003

## New Three-Deck, Three-Propeller 1200 H. P. Passenger Motor-Boat

This passenger motor-boat is intended for transportation of passengers and goods on rivers and lakes. Steel, aliwelded construction. The motor-boat is driven by three motors which are provided with turbo-blowers. Fully automatic operation. Maximum length: 96.51 metres. Maximum width: 14,98 metres. Approximate speed: 25 km./hr. Number of passengers: 421. Crew: 70. Tonnage: 1468 tons.

\*\*TECHNOEXPORT\*\*



21/003

21/004 Model of MOL 1200 Engine-Room TECHNOEXPORT 21/006
Panels, Photographs, Reliefs
TECHNOEXPORT

From the periodical

## CZECHOSLOVAK FOREIGN TRADE

you can learn about the products you have not seen at the exhibitions. The periodical appears three-times a year in six languages and contains information on the export products of all branches of the Czechoslovak industry.

### 22 PUMPS

### 22/001 Centrifugal Boiler Feed Pump SIGMA H-VN-2/x-HD

designed for supplying boilers with treated hot or cold water, condensate repumping in boiler economy as well as for handling other liquids at higher temperatures and pressures.

STROJEXPORT

# **22/002** SIGMA H-VA-125/III-FT

designed for feeding water to steam boilers up to a temperature of 210 °C, condensate pumping in boiler economy, etc. Capacity: 1700 litres per minute. Total manometric delivery head: 290 metres. STROJEXPORT

# **22/003**Steam Piston Pump J 250/175/150 in dia.

used for supplying boilers with water, as a mine pump and for pumping water up to a temperature of 120 °C. Capacity: 500 litres per minute.

STROJEXPORT

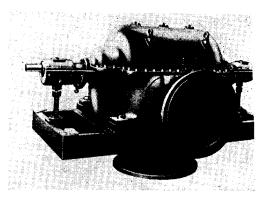
# **22/004** SIGMA SLS-8

This vertical diagonal pump for dry sumps is used for handling clean or slightly poluted water, for cooling systems as well as for repumping stations of waste and industrial waters, etc. Capacity: 60,000 to 102,000 litres per min. Total volumetric delivery head: 10 to 20 metres. Dia. of neck: 800 mm.

### 22/005 SIGMA SF-800

This spiral casing horizontally split centrifugal pump with two parallel impellers and inlets on both sides, is used as a cooling pump for steam turbines in large thermal power plants. Capacity: up to 120,000 litres per min. Total volumetric delivery head: up to 22 metres.

STROJEXPORT



### 22/006 SIGMA K-800

spiral casing horizontally split centrifugal pump is suitable for condensers of large steam turbines. Capacity: 85,000 litres per min. Total volumetric delivery head: 25 metres.

STROJEXPORT

22/006

### 22/007 SIGMA TH-VG-7/I-K

hot water circulation pump for working temperatures up to 180 °C is suitable for heating plants, industrial or long distance heating systems, oil and other industries. Capacity: 400 cu. metres per hour. Total, volumetric delivery head: 33 metres. Speed: 1450 r. p. m. STROJEXPORT

### 22/008

### SIGMA 65/65-F/2

is a high-pressure hot water circulation centrifugal pump, designed for hot water circulation in a system of boiler tubes, or for long distance heating with water up to 260 °C. Capacity: 28 cu. m. per hour. Total volumetric delivery head: 40 metres of w. col. Maximum working pressure: 52 kg/sq. cm.

STROJEXPORT

# **22/009** SIGMA DDP-14/60

This high-pressure double plunger horizontal dosing pump is intended for pumping and dosing of small quantities of liquids (chemicals). Maximum capacity: 57 litres per min. Total volumetric delivery head: 100 atm.

STROJEXPORT

### 22/010

### Single-Plunger Vertical Dosing Pump of SDEP 16/30 Series

designed for dosing various chemicals and non-saturated solution af salts of a maximum viscosity of 2 to 3 °E up to a pressure of 25 atm and a temperature of 100 °C under dustproof conditions. Maximum capacity: 32 litres per min. Total volumetric delivery head: 25 atm. STROJEXPORT

### 22/011 SIGMA CCn-80/XII-SP

High-pressure centrifugal boiler feed pump up to a temperature of 200 °C. Capacity: 45 tons per hour. Total volumetric delivery head: 68 atm. STROJEXPORT

#### 22/013 SIGMA NBB-250

A single-stage spiral casing dredger type centrifugal pump for hydraulic conveyance or extraction of hard, loose materials (dross, slag, ash, gravel, sand, etc.), for the deslagging equipment in power plants or heating plants as well as for conveying sludge in ore dressing plants, aluminium plants, cement factories, etc. Capacity: 5000 to 11,000 litres per min. Total volumetric delivery head: 60 to 48 metres.

#### STROJEXPORT

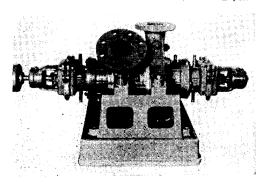
### 22/014 SIGMA TT-VL-3/II-D

A double-stage centrifugal pump designed for handling hot oils up to a temperature of 300 °C and volatile liquids in the chemical industry. Capacity: 250 litres per min. Total volumetric delivery head: 12 metres.

STROJEXPORT

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### 22/014



## **22/014a** SIGMA TT-VN-6/II

A double-stage centrifugal pump designed for handling hot oils up to a temperature of 300 °C and volatile liquids in the chemical industry. Capacity: 1700 litres per min. Total volumetric delivery head: 56 metres.

STROJEXPORT

### 22/015 SIGMA P-ZUV-4

A medium-pressure rotary gear pump designed for supplying oils, crude oil, petroleum and other viscous liquids to the lubricating systems of various machines and equipment, suitable for oil hydraulic drives, etc. Capacity: 23 litres per min. Working pressure: 20 atm. Speed: 920 r. p. m. STROJEXPORT

#### 22/016 SIGMA HT 16/8

A high-pressure oil pump, designed for handling oil where high pressures are required for a small quantity of the pumped liquid. Maximum capacity: 10.4 litres per min. Total volumetric delivery head 20—140 atm.

### STROJEXPORT

#### 22/U17 SIGMA BVA-5/X+X-OHD

A heavy-duty double-casing mine pump with a common driving motor in the centre for the main high-pressure pumping stations in bituminous coal and ore mines. Capacity: 800 to 1400 litres per min. Total volumetric delivery head: 650 to 560 metres.

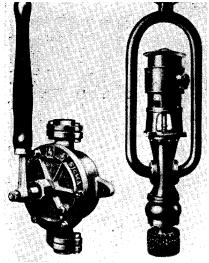
### STROJEXPORT

#### 22/018 SIGMA VR-VA-2a/VII

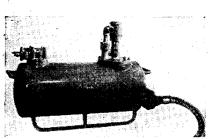
A vertical sinking pumping set with a pump enclosed in a steel frame, suitable for dewatering flooded mines or deepening shafts characterized with a considerable fluctuating water level. Capacity: 250 litres per min. Total volumetric delivery head: 95 metres. STROJEXPORT

#### 22/019 SIGMA VP-VN-2/VI

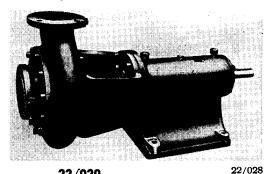
A vertical sinking pumping set with a pump designed for drainage operations, dewatering shafts or boring wells on building sites. Capacity: 350 litres per min. Total volumetric delivery head: 108 metres. STROJEXPORT



22/022



22/020



22/020 SIGMA NORA

A portable pneumatic pump for compressed air drive, without rotating parts, with automatic plunger adjustment, suitable for mines. Capacity:

50 to 175 litres per min. Total volumetric delivery head: 45-8 metres. STROJEXPORT

# 22/021 RUBINA Pneumatic Pump

This portable centrifugal spiral casing pump is designed to handle mine water. Capacity: 250 litres per min. Total volumetric delivery head: 6—50 atm. STROJEXPORT

### 22/022 SIGMA - 2-FSK Diaphragm Pump

This portable pump is designed for handling mine water. Capacity: 400 litres per min. Total volumetric delivery head: 5 atm. STROJEXPORT

# 22/023-024 SIGMA KDD and IDD Duplex Horizontal Piston Pumps

Steam or compressed air operated pumps without crank mechanism. They are used for feeding steam boilers and conveying clean, industrial or mine water and oils.

STROJEXPORT

#### 22/026 SIGMA LPV 4"×6"

a heavy duty pump designed to operate under difficult operating conditions, especially used as a drilling pump for deepening crude oil bore-holes and other bore-holes.

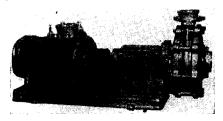
STROJEXPORT

# **22/027** SIGMA OL-20 Pump

suitable for handling oils and other viscous liquids up to a temperature of  $80\,^{\circ}\text{C}$ . STROJEXPORT

### 22/028 SIGMA CH

A single-stage spiral casing centrifugal pump, designed for priming acids and lyes in the chemical industry. Pumps of this type are made in castiron, cast-steel, bronze, lead, stainless steel or fersilite as well as rubberlined and of ceramic materials according to the kind of liquid pumped. Capacity: 60 to 4500 litres per min. Total volumetric delivery head: 7 to 75 metres. STROJEXPORT



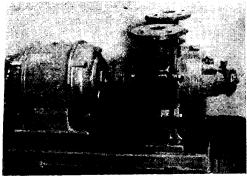
22/029

### 22/029 SIGMA BUC-6a-FESI Single-Stage Centrifugal Pump

without gland, for handling acids and lyes as well as other liquids used in the chemical industry. Capacity: 300 to 1200 litres per min. Delivery Head: 14 to 30 metres. STROJEXPORT

### 22/030 SIGMA W-CH-4

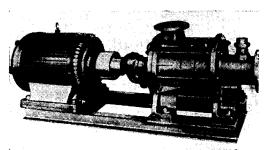
A single-stage spiral casing centrifugal pump for acids and lyes, used in the chemical industry. Capacity: 100 to 500 litres per min. Total volumetric delivery head: 52—10 metres. STROJEXPORT



22/031

### 22/031 SIGMA RV-448

A single-stage water ring rotary airpump for priming air in enclosed spaces, with a final vacuum of 0.025 atm. STROJEXPORT



22/031a

# **22/031a** SIGMA HK-7/IV-S

An efficient four-stage condensation pump for priming condensate from the steam turbine condensation. Capacity: 1300 to 2500 litres per min. Total volumetric delivery head: 180—152 metres. Speed: 1460 r. p. m. STROJEXPORT

### 22/032 SIGMA SLP-20/II

Horizontal, piston, single- or double-cylinder type; used for vacuum equipment or as compressors for an overpressure up to 1 atm. STROJEXPORT

### 22/033 SIGMA RLP-45/73

A water ring rotary air pump, used for priming gases and vapours from enclosed spaces with a final vacuum of 0.05 atm. and for producing a vacuum in various under-pressure systems in the food, chemical or metallurgical industries. Capacity: 27 cu.metres per hour at a vacuum of 0.1 atm.

STROJEXPORT

### 22/034 SIGMA RJ 275/200/320 Horizontal Duplex Double Cylinder Pump with Ball Valves

designed for handling clean or impure liquids, oils, emulsions etc. of a maximum viscosity of 250 °E and a maximum temperature of 350 °C.

STROJEXPORT

### 22/035 Single Cylinder Piston Steam Pump E 150/130/150

for handling oil products and other liquids of a viscosity up to 60 °E and maximum temperature of 350 °C. Maximum capacity: 60 litres per min.

STROJEXPORT

### 22/036 High-Pressure Horizontal Plunger Pump SIGMA III-38/100 CHTP

for handling chemicals and other liquids of lower viscosity without mechanical admixtures. Maximum temperature of liquids: 90 °C. Capacity: 86 litres per min. STROJEXPORT

### 22/037 Horizontal Three-Plunger Pump MTP-III-118/120

for handling lyes up to a temperature of 60 °C. Capacity: 54 to 600 litres per min. Total volumetric delivery head: 50 to 85 atm. STROJEXPORT

# 22/038 Diaphragm Pump SIGMA 25-CHM 200/50 Gum

A single-acting horizontal pump with crank mechanism. Suitable for priming solutions of galvanic baths, for filtration, etc.

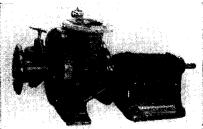
STROJEXPORT

### 22/039 Dosing Pump of SIGMA DEP Series 40/30

A single-acting single-plunger dosing pump with crank mechanism and adjustable length of plunger lift within 0 to 100 p. c. with the pump at a standstill. It delivers and doses various chemicals and non-saturated solutions of salts.

### **22/040** SIGMA NZ-5a

A small single-acting spiral casing centrifugal sludge pump suitable for handling impure liquids with solids, as well as sludge, sewage and waste water on building sites, in sewerage systems, mines, paper mills, etc. Capacity: 100 to 2800 litres per min. Total volumetric delivery head: 16,5 metres. STROJEXPORT



22/041

### 22/041 SIGMA OZ-10

Single-stage spiral casing non-clogging centrifugal pump, designed for heavy duties, It is especially suitable for handling impure liquids with solids, sludge, sewage, refuse and waste water in the sewerage systems of large cities, industrial establishments, and also finds use in the building trade and sugar mills for conveying beet slices with water, etc. Capacity: 6,000—14,000 litres per min. Total volumetric delivery head: 28—20 metres.

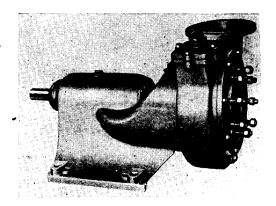
STROJEXPORT

### 22/042 SIGMA DK 100 Rotary Volumetric Pump

designed for handling viscous liquids up to a temperature of 80 °C, such as oil, tars, varnishes, fats, soap, glue, treacle, molasses, mash, fruit juices, etc. Capacity: 385 litres per min.

STROJEXPORT

22/040



### 22/043 SIGMA ZCS

A gear pump for priming liquid polyamide, finds use with rayon spinning machines where a high dosing accuracy is required. Capacity: 0.6 to 2,4 cu. cm per rev. STROJEXPORT

### 22/043a SIGMA ZCV

A gear pump, designed for use with spinning machines for the production of rayon, corduroy fibres, etc. where a high dosing accuracy is required. Capacity: 0.6 to 36 cu. cm.

STROJEXPORT

### 22/044 SIGMA ZPK

A low-pressure rotary gear pump, designed for handling oils and other lubricants. It finds use with lubricating and cooling systems of machine tools, combustion engines, etc. as well as with hydraulic oil drives of various machines and equipment. Capacity: 1 to 72 litres per min. Total volumetric delivery head: 10—6 atm.

STROJEXPORT

### 22/044a SIGMA ZPG

A low pressure rotary gear pump, designed for handling thin or thick lubricants, such as oils, grease, treacle, lyes, etc. It also finds use with lubricating and cooling systems of various machines, etc. Capacity: 45 to 1000 litres per min. Total volumetric delivery head: up to 6 atm. STROJEXPORT

### 22/044b SIGMA ZUN

A high-pressure precision spur-gear pump, designed for handling all kinds of oils. It finds use with lubricating systems, hydraulic oil drives, oil firing, and oil economy in general. Capacity: 5 to 1500 litres per min. Total volumetric delivery head: 40—16 atm. STROJEXPORT



22/043

# 22/045 SIGMA VA-7/IV-DA

A single- or multi-stage centrifugal pump for delivery heads up to 450 metres. Suitable for water-works, mines and other industries up to a temperature of 80 °C of the pumped water. Capacity: up to 3000—4000 litres per min. Total volumetric delivery head: up to 160—450 metres. STROJEXPORT

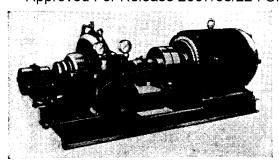
### 22/046 SIGMA NO-5a

A single-stage spiral casing centrifugal pump on frame, designed for handling clean and slightly impure water up to a temperature of 80 °C. Suitable for water-works, irrigation, heating plants for condensate priming and various industries. Capacity: up to 6,000 litres per min. Total volumetric delivery head: up to 18—13 metres.

STROJEXPORT

# **22/047** SIGMA 125 AVBV

A vertical centrifugal pump, suitable for deep and narrow boreholes. The modern design considerably reduces the weight of the set, facilitates assembly and enables various types of drive. The pump is used for general water systems, irrigation, industrial purposes, etc. Capacity: 1300 litres per min. Total volumetric delivery head: 55 metres. Speed: 1750 r. p. m. STROJEXPORT



### 22/048 SIGMA Q-150

22/048

A centrifugal, medium pressure, spiral, horizontally split casing with double-entry impeller. Capacity: 5000 litres per min. Total volumetric delivery head: 43 metres. STROJEXPORT

### 22/048a SIGMA Q-350

A centrifugal medium-pressure spiral and horizontally split casing pump with double-entry impeller. Capacity: 14 000—22 000 litres per min. Total volumetric delivery head: 90—82 metres. STROJEXPORT

### 22/049 NAUTILA Submersible Pump

with special water-proof electric motors of an output up to 60 H. P., for deep wells and bore holes up to 150 metres deep and 145 mm. in diameter. Suitable for pumping clean or industrial water for water-works, agricultural, industrial or household purposes. Capacity: 20 to 3,000 litres per min. Total volumetric delivery head: 15 to 155 metres. STROJEXPORT

### **22/050** SIGMA 100-HFAW

A vertical centrifugal sludge pump for dry pits. This single-stage spiral casing pump is used in repumping and sewerage stations, industry and building trade for handling sludge, sewage and waste water. Capacity: 2000 litres per min. Total volumetric delivery head: 3 metres. STROJEXPORT

### 22/051 SIGMA 100-HFBW

A vertical single-stage spiral casing centrifugal pump. Wet pits. The pump is designed for handling sludge, sewage and waste water in public sewerage system, in industry, building trade, etc. Capacity: 2000 litres per min. Total volumetric delivery head: STROJEXPORT

# 22/052 Model of a Filtering Station STROJEXPORT

# 22/053 REVOLT-SUPERIOR Rainer With Spray-Line

finds use in horticulture. The oscillator and spray lines with spray nozzles are especially suitable for young or tender plants, flowers, early crops, etc. and are the nearest approach to rain. Dia. of spray-line: 2'' up to 60 metres in length or  $2^{1/2}''$  for a length of 60 to 100 metres. Range: 7.5 + 7.5 metres. Weight: 29 kg. Length: 100 m.

### High-Pressure Rainer ZV-2000

intended for irrigation of large areas. Mobile, drawn and driven by the ZE-TOR-35 SUPER tractor. Covered area: 0.5 hectare per hour. Water sonsumption: 100—2000 litres per min.

STROJEXPORT

# 22/054 REVOLTIN Garden Sprinkler

A smal-type rotary sprinkler. Covered area: 254 to 804 sq.metres. Range: 9 to 14 metres. Weight: 8.20 kg.

ROT-REVOLT RR-1-P, RR-2-P, RR-3-P, RR-4-P long range field rotary rainers are used in horticulture and for spraying field crops with clean or river water.

# 22/055 Low-Pressure Irrigation Pumps

of various type. Capacity: 600 to 10,000 litres per min. Total volumetric delivery head: 6 to 20 metres.

STROJEXPORT

### 22/056 SIGMA NC-150

A single-stage centrifugal pump with frame, used for conveying cement sludge in cement factories. The removable casing cover ensures easy checking of the impeller and cleaning of the pump. Capacity: 400 to 1200 litres per min. Total volumetric delivery head: 66 to 61 metres. STROJEXPORT

# **22/057** SIGMA NC-150

A single-stage centrifugal pump with frame, used for conveying cement sludge in cement factories. The tiltable casing cover enables easy checking of the impeller and cleaning of the pump. Capacity: 1000 to 3500 litres per min. Total volumetric delivery head: 44—43 metres.

STROJEXPORT

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# 22/059 High-Pressure Plunger Pump SIGMA R/6

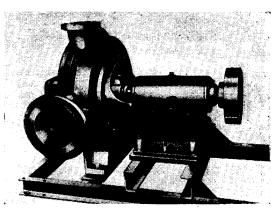
horizontal, double-pressure, six-plunger type for the delivery of clean liquids up to a temperature of 80 °C. Maximum capacity: 18—95 litres per min. STROJEXPORT

# 22/060 Double-Pressure Radial Plunger Pump RTP 25/16/10

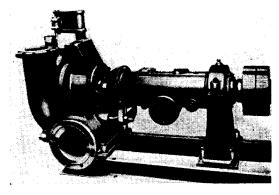
for hydraulic purposes, for driving presses and similar equipment where two various pressures and two supplied quantities are required in operation the volume of which cannot be changed and depends on the speed. Designed for bearing oil. Capacity: 32—50 litres per min. STROJEXPORT

# 22/061 High-Pressure Piston Pump of RR Series

designed for handling clean liquids without mechanical admixtures up to a temperature of 80 °C. The pumps are intended to operate under normal, i. e. dust-proof working conditions, free from harmful gases and vapours, sheltered from atmospheric influences.



22/056



22/057

### 22/062 Hand Pump NP-225

with low stand, used for pumping clean or industrial water from wells, 7 metres deep. Maximum capacity: 40 litres per min.

### STANDARD Hand Pump

with high stand for pumping clean or industrial water from wells, up to 29 metres deep. Maximum capacity: 37 litres per min.

### **DURAL Hand Pump**

with stand for pumping clean or industrial water by hand or taking water at the outlet for its delivery to distant places. Suitable for wells up to 30 metres deep. Maximum capacity: 42 litres per min.

STROJEXPORT

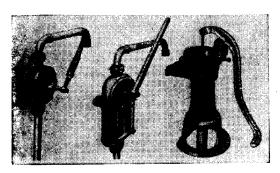
# 22/063 LILA-75 Double-Piston Suction and Pressure Pump

used for pumping water in houses and farms from wells up to 7 metres deep. Maximum capacity: 40 litres per min. STROJEXPORT

# 22/064 MOSTAR-90z Single-Cylinder Double-Acting Hand Pump

used in households for drawing water from wells, 6 metres deep. Capacity: 65 litres per min. The MOSTAR 90 Z single-cylinder double-acting hand pump is mounted on a single-wheel barrow.

STROJEXPORT



### 22/065 ORIENT Pitcher-Spout Pump

with low stand for pumping water from shallow wells up to 5 metres in depth. Maximum capacity: 40 litres per min.

STROJEXPORT

### 22/066 Wing Pumps

suitable for handling liquid fuels such as petrol, benzol, alcohol, crude oil, petroleum, hot or cold water, etc. Capacity: 11.5—68.5 litres per min.

## STROJEXPORT

### 22/067 RAKETA 185 Hand Piston Pump

for handling liquid manure, waste water, sludge, etc. without heavy admixtures. Maximum capacity: 75 litres.

STROJEXPORT

# 22/068 EPOCHAL H Horizontal Centrifugal Sludge Pump

for pits 1 to 5 mm. deep and a delivery head of 6 to 8 metres. Maximum capacity: 600 litres per min.

The EPOCHAL-V vertical centrifugal sludge pump finds use in agriculture for pumping industrial water and liquid manure. Maximum capacity: 50—250 litres. STROJEXPORT

### 22/069 SIGVERTA 40 Portable Vertical Close-Coupled Multi-Stage Centrifugal Pump

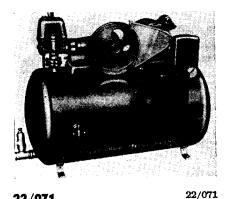
suitable for domestic water supply and garden irrigation. Maximum suction lift for handling cold water: 6.5 metres of w. column. Maximum capacity: 60—90 litres per min.

STROJEXPORT

# 22/070 DARLING MIKRO Water Supply System

designed for use in houses, hotels, farms, etc. Delivery head: 10 metres. Tank capacity: 150 litres.

STROJEXPORT



### 22/071 DARLING MOSTARET

automatic water supply system with a tank of 150 litre capacity. Guaranteed daily water supply: 15 hectolitres. Maximum suction head: 6.5 metres. Maximum outlet above tank: 10 metres.

STROJEXPORT

### 22/072 DARLING NAUTILA-JUBILA

automatic water supply system with a tank of 150 or 300 litre capacity, for wells and bore holes up to 25 metres in depth. Maximum daily water supply: 60 hectolitres. Minimum diameter of well (bore hole): 200 mm. Head: 10 metres.

### 22/073 DARLING MILOR

automatic water supply system with 300 litre tank and suction equipment for wells up to 25 metres deep. Maximum daily water supply: 45 hectolitres. Minimum diameter of well (bore hole): 180 mm. Head: 18 metres.

STROJEXPORT

# 22/074 DARLING KONTA Water Supply System

supplies water to households, hotels, farms, etc. Head: 18 metres. Tank capacity: 300 litres. STROJEXPORT

# 22/075 DARLING SUPERIOR Water Supply System

Head: 18 metres. Tank capacity: 500 litres. Tank working pressure: 4 atm. STROJEXPORT

# 22/076 Model of an Irrigation Station STROJEXPORT

### 22/077 Kerbside Pump

Reading from both sides. Automatic pump switching on and off. Instant reverting system. Maximum capacity of pump: 50 litres per min. Maximum suction lift: 6 metres of w. col.

STROJEXPORT

### 22/078 Kerbside Pump with Computor

with measuring and pumping monoblocks. Same output as with preceding type. Counters: reverting unit counter, computor, sum total computor and counter, volume counter in litres.

STROJEXPORT

### 22/079 Oilmix Kerbside Pump

for two-stroke engines, with computor. Counters: petrol counter, oil computor, sum total oilmix computor, sum total petrol, oil and money counters.

STROJEXPORT

### 22/080 Ammonia Rotary Flow-Meter L600 Č 64

designed for use in chemical plants.

Capacity: 600 litres per min.

STROJEXPORT

# 22/081 Mobile Pumping and Measuring Group

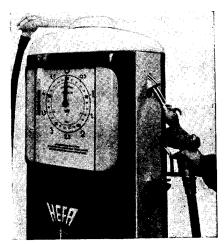
for wine, with PD 50 litre bronze pump and L 300 bronze flow-meter. Capacity: 160 litres per min. STROJEXPORT

### 22/082 Rotary Flow-Meter L 4000

used for liquid fuels. Maximum capacity: 4000 litres per min.

STROJEXPORT

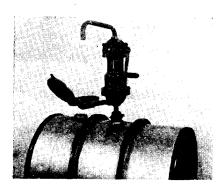
22/077



### 22/083 Motormeter

A rotary flow-meter for small quantities of liquid fuels, and the like. Capacity: 20 litres per hour.

STROJEXPORT



### 22/084 **Mobile Oileconom Pump**

22/084

for filling cans with lubricating oils at a rate of 0.5 litre per rev. Tank capacity: 120 litres. STROJEXPORT

### 22/085 Oil Piston Hand Pump

an oileconom for filling cans with lubricating oils at a rate of 0.5 litre per rev. STROJEXPORT

### 22/087 Measuring Group with L 600 Flow-Meter

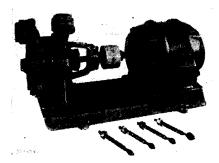
for use with liquid fuels and viscous liquids. Tank type. Maximum capacity: 600 litres per min.

### Pumping Set with Gear Pump **ZUS 80**

for handling viscous materials, such as varnishes, asphalt, etc. Capacity: 100 to 630 litres per min. STROJEXPORT

### 22/088 Pump Al 32/I-K

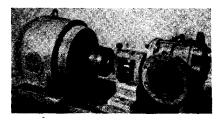
for pumping clean water. Capacity: 30 to 80 litres per min.



22/088

### Plunger Switch E 214

for automatic switching on or off the pump, for filling tanks with inflammable liquids, etc. STROJEXPORT



22/089

### 22/089 Gear Pump PZu 10

designed for pumping pure viscous liquids such as lubricating oils and grease up to 50  $^{0}\mathrm{E}$ . Maximum working temperature: 80 °C. Maximum capacity: 8-11 litres per min. STROJEXPORT

### 22/090 Gear Pump PZu 250

designed for pumping pure viscous liquids, oils, etc. up to 300  $^{0}E.\ \mbox{Maxi-}$ mum working temperature: 80 °C. Maximum capacity: 250 litres per min.

STROJEXPORT

### 22/091 **Mobile Pumping Sets**

bronze type, without meter, also with self-priming PD 40 pump. Capacity: STROJEXPORT 100 litres per min.

# MOTOKOV

Foreign Trade Corporation for Import and Export of Vehicles and Light Engineering Products

47, Třída Dukelských hrdinů, PRAHA VII, CZECHOSLOVAKIA

Telegrams: MOTOKOV Praha Teleprinter: Praha 247 Telephones: 0000, 73241-9

Passenger motor cars • utility cars (delivery vans • station wagons • ambulances) lorries • special cars • buses • trolley buses

Motor-cycles • bicycles • bicycle parts

Electrical and mechanical equipment for motor vehicles • chains for engines and industry

Tractors and agricultural machines

Workshop equipment • woodworking machinery • artisan's handtools

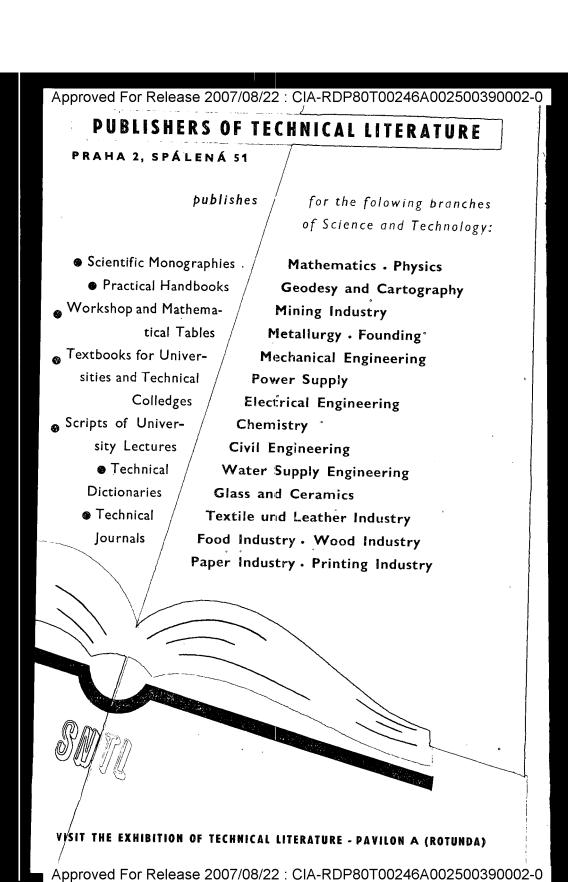
Equipment for large kitchens and household kitchens

Equipment for foodstuff shops and industry

Tyres • flat and V-belts • storage battery cabinets • technical accessories of rubber, plastic and asbestos

Enamel-ware and baths • enamelled cast iron sanitary equipment

Approved For Release 2007/08/22 : CIA-RDP80T00246A002500390002-0



News from the world over published in the technical journals of SNTL

Monthly intended for engineers and technicians engaged in heavy engineering, precision engineering, automotive industry and agricultural machinery. Brings articles on new calculating methods, on results of research and development in factories and research institutes.

## STROJÍRENSTVÍ ENGINEERING



Technical monthly for workers, foremen, and technicians of engineering works. Brings information on machining, shaping, heat treatment, surface finishing, and welding. Attention is paid to new production methods, new machines, and tools.

## STROJÍRENSKÁ VÝROBA

ENGINEERING **PRODUCTION** 



Monthly dealing with design, production methods, utilisation of fine mechanics and optics in technical practice, horology, and measuring technique.

## JEMNÁ MĚCHANIKA A OPTIKA

FINE MECHANICS AND OPTICS



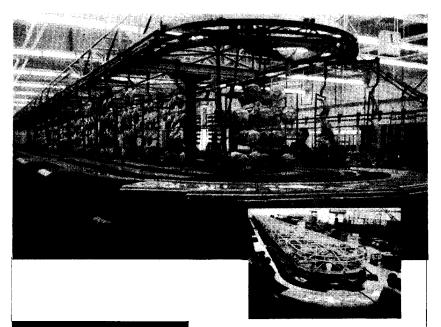
Brings information on progressive working methods at home and abroad. Solves actual problems of foundry operation and helps to widen the allround usefulness of progressive working methods.

## SLÉVÁRENSTVÍ FOUNDRY INDUSTRY



Inspect these journals at the Exhibition of Technical Literature — Pavilon A (Rotunda).

Approved For Release 2007/08/22 : CIA-RDP80T00246A002500390002-0



# Blasberg

supplies complete galvanizing equipment for all types of galvanizing from the simplest to fully automatic equipment

Anodes

Chemicals

Polishing materials



# Friedr. Blasberg G. m. b. H.

All galvanizing requisites

Spezialfabrik für Galvanotechnik Solingen-Merscheid

Teleprinter: 08514835 - Telephone: Solingen 13145-48

### 22/092 One-stage Self-Priming Pump PA 80

designed for handling volatile liquids up to 4 °E in viscosity. Maximum working temperature: 40 °C.

STROJEXPORT

# 22/095 Petrol Piston Hand Pump with

for filling cans with petrol and other inflammable materials. Maximum capacity at 35 double-strokes: 30 litres per min. STROJEXPORT

### 22/096 Metal Slit Filters

for purifying oils by removing me-

chanical impurities by means of metal plates. Maximum flow: 100 to 6500 litres per hour. STROJEXPORT

# 22/097 Adjustable Repeated Supply Equipment

A rotary L 300 flow-meter with a stop-valve. Adjustable supply range: 9 to 9999 litres. STROJEXPORT

### 22/098 Diaphragm Pump, M-360 in dia.

especially designed for injecting cement milk. Also suitable for handling very impure liquids. Supplied air-pressure: 7 atm. Capacity:  $0.5\ l-1.3\ l$  per stroke. STROJEXPORT

# 23 PRODUCTS OF REFRACTORY MATERIAL

### 23/001 Refractory Material Products

Raw magnesite, dead burned magnesite, steelmakers grade of various granulation, magnesite powder, magnesite bricks, crucibles and small laboratory furnaces, chrome-magnesite bricks, magnesite-chrome bricks, silica bricks for metallurgy, silica mortar, fireclay bricks, fireclay mortar.

CZECHOSLOVAK CERAMICS

### 23/002 Standard Electrodes and Special Fluxes

STROJEXPORT

### 23/003 Steel Cylinders

for compressed liquid gases and carbon dioxide. STROJEXPORT

### 23/004 Segment Saws

Ø 910 and Ø 1610 multi-edged cutting tool, rotating around its own axis. The segments can be easily exchanged.

23/008 Specime

23/007

**Springs** 

### Specimens of Poldi Steel Tools

High-speed steel tipped turning tools, tool holders, percussion crown drills, dies.

### 23/009 Sintered Carbides

Sintered carbide tools, diamond tipped tools, ferromagnetic material, thermistors. FERROMET, KOVO, METALIMEX

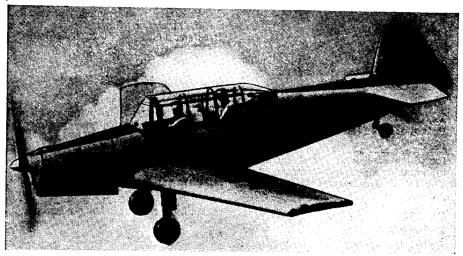
## 23/005 Side Milling Module Cutter

m  $24\times20^{\circ}$  Hobbing cutter m  $24\times20^{\circ}$ . Shank milling head Ø  $250\times$  Mk 100. Durable housing of the cutter and easy exchangeability of tools. STROJEXPORT

# 23/006 Aircraft and Motor Cars Crankshafts

FERROMET

## FERROMET

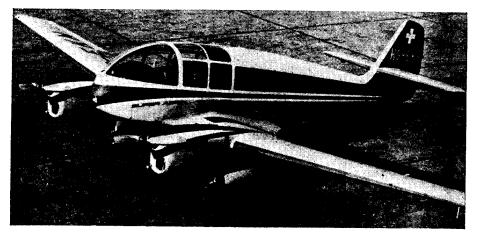


24/001

## 24 AIRCRAFT EXHIBITION

24/001 Z 226 Trener

All-metal, two-seat, training and fully aerobatic aircraft with installation for towing. Max. speed 200 km/h, cruising speed 175 km/h, range 560 km. OMNIPOL



24/002

24/002 Super Aero

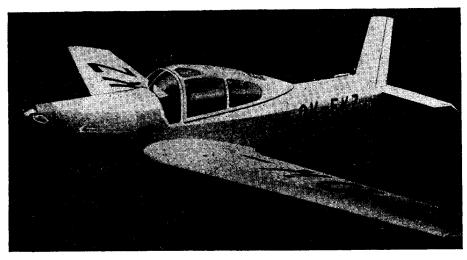
Four-seat, two engine sports, training, liaison and aero-taxi aircraft. Max. speed 270 km/h, cruising speed 240 km/h, range 1750 km.  $\begin{tabular}{c} OMNIPOL \end{tabular}$ 



24/003

### 24/003 L 60 Brigadyr

High-wing, multipurpose (touring and training tug, ambulance and agricultural) aircraft. Max. speed 191 km/h, cruising speed 180 km/h, min. speed 52 km/h. OMNIPOL



24/004

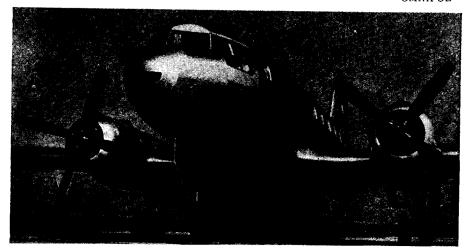
24/004 LD 40 Meta Sokol

All-metal touring and sports low-wing aircraft for 3—4 occupants. Max. speed 260 km/h, cruising speed 220 km/h, min. speed 88 km/h. OMNIPOL



24/005 Helicopter HC 2 Heli-Baby

Ultra light two-seat helicopter suitable for training helicopter pilots and for fast transport. Max. speed 130 km/h, cruising speed 100 km/h. range 180 km. OMNIPOL

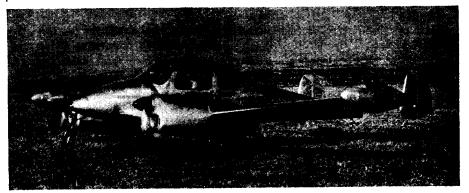


24/006

24/006 Transport Aircraft AVIA-14-22

Two engine short and medium range all metal aircraft for 22 passengers, 5 crew members and freight suitable for operations from small grass aerodromes. Max. speed at 2000 m 416 km/h, cruising speed at 2000 m 320 km/h, min. speed 110 km/h, range at cruising speed 2000 km.

OMNIPOL



24/007 L 200

Five seat, two engine sports, training, liaison and aerotaxi aircraft. The most up-to-date Czechoslovak transport aircraft. Max. speed 300 km/h, cruising speed 275 km/h, range 1600 km.

OMNIPOL

### 24/008 Herkules III

Self-propelled, two-drum winch for launching sailplanes with diesel engine Tatra 108. Engine output 134 HP.

OMNIPOL

### 24/009 Electrically driven artificial

horizon LUN 1201

for all sorts of aircraft with unlimited freedom of movement about both functional axes. Weight 1200 g. OMNIPOL

### 24/010 Horizon LUN 1202

a gyroscopic flight instrument indicating aircraft's altitude relative to the horizontal plane during blind flying.

OMNIPOL

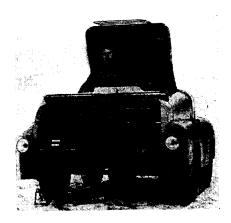
### 24/011 Horizon LUN 1207

in principle the same as horizon LUN 1202, but this one is fed directly from a D. C. battery without the use of a convertor.

OMNIPOL

# 24/012 Airspeed indicator to 200/400 km/h LUN 1101

an airspeed indicating instrument for slow aircraft. Weight 250 g. OMNIPOL



24/013 24/008 Airspeed indicator to 400/800 km/h LUN 1103

for all types of aircraft except the very slow and high-speed aircraft. Weight 250 g. OMNIPOL

### 24/014

"Flot plate" rate of climb indicator to 5 m/sec LUN 1141

a sensitive instrument used for keeping the aircraft flying in a horizontal plane and for the indication of low rates of climb. Weight 480 g. OMNIPOL

157

24/007

### 24/015

### Rate of climb indicator to 15 m/sec LUN 1145

for various types of aircraft whose rates of climb are designed not to exceed 15 m/sec. Weight 280 g. OMNIPOL

### 24/016

# Rate of climb indicator to 30 m/sec LUN 1146

for aerobatic sailplanes and fast powered aircraft; has the same advantages as the 15 m/sec rate of climb indicator.

OMNIPOL

### 24/017

### Altimeter to 10 000 m LUN 1121

for sailplanes, helikopters and powered aircraft of all types which do not fly higher than 10 000 m. Weight 650 g OMNIPOL

### 24/018-019

### Pilot head LUN 1151 and LUN 1152

a pick-up of static and dynamic presure connected to aircraft altimeters and rate of climb indicators. Can be installed in any type of aircraft and functions satisfactorily at all speeds.

OMNIPOL

#### 24/020

# Test laboratory for testing aircraft instruments

a combined set-up of various test facilities for testing horizon's pressure gauges, horizon's converters breathing apparatus, fire detectors-warnings, airspeed indicators, machmeters, altimeters, cabin altimeters, compressor pressure gauges, rate of climb indicators and other aircraft diaphragmtype instruments, facilities for vibration tests are also provided. OMNIPOL

# 24/021 Portable test equipment diaphragm-type instruments PM

installed in a small coffer  $460\times320\times225$  mm, this equipment serves for testing altimeters, machineters, rate of climb indicators and airspeed indicators. Weight 20 kg. OMNIPOL

### 24/022

### Portable equipment for testing the breathing apparatus PD

enables checking some parameters of aircraft oxygen apparatus, breathing masks, hose leakages, overpressure and low pressure. It is installed in a bag  $460 \times 320 \times 160$  mm. Weight 15 kg.

OMNIPOL

### 24/023

## G-meter

The instrument can be used for simple measurements of variable accelerations; it may also be used for measuring accelerations acting in one sense only. The advantage of this instrument is the instantaneous reading of the recorder acceleration value.

OMNIPOL

#### 24/024

### Glow-plug engine Vltavan

2.5 and 5 ccm

**OMNIPOL** 

#### 24/025

Pocket altimeter

**OMNIPOL** 

### 24/026

Relays

**OMNIPOL** 

#### 24/027

Thermostat T3m, T31, T32

OMNIPOL

#### 24/028

### Direct reading pilot compass LUN 1222

is manufactured for northern as well as southern hemispheres according to customers' request. Weight 400 g. OMNIPOL

### 24/029

# Electrically driven turn and bank indicator LUN 1213

Gives instantaneous indication of angular speed and of corresponding bank angle when an aircraft executes a level turn.

OMNIPOL

#### 24/030

#### Speed indicator

is designed according to the small-size standard of aircraft instruments, 60 in dia, and consists of the indicating system and a synchronous motor.

OMNIPOL

#### 24/031 Transmitter of the distant-reading speed indicator

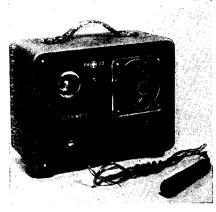
is an A. C. generator, where the current frequency is equal to the number of revolutions of the crankshaft.

OMNIPOL

#### 24/032 Direct-function speed indicator LUN 1301

retains the same accuracy of indication as the distant-reading instruments. It works on the magnetic tachometer principle and has a temperature compensating device.

OMNIPOL



24/032

## **24/033 ELOX-METER**

An instrument enabling a quick check of the anodised layer thickness in series production. It is used on alluminium and its alloys.

MOTOKOV

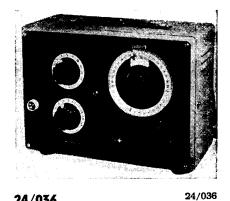
#### 24/034 Portable stroboscope RS-55

It has two frequency ranges: 200 to 3000 r. p. m. and 1000 to 15000 r. p. m. The shown accuracy between the temperature limits  $-30\,^{\circ}\mathrm{C}$  to  $+40\,^{\circ}\mathrm{C}$ . Weight 850 g. OMNIPOL

#### 24/035 Compensating switch-box for strain-gauge measurements type PS-1

Enables quick and accurate measurements with various strain-gauges stuck on to the tested detail. One compensating strain-gauge may be used for more points. Weight approx. 5 kg.

OMŇIPOL



#### 24/036 Strain-gauge unit SA-1

used for routine strain-gauge measurements. Weight with batteries 12 kg. OMNIPOL

# 24/037 Oil and fuel pressure triple indicator - LUN 1521 OMNIPOL

24/038

Fuel pressure transmitter
(to 0,5 kg/cm $^2$ ) - LUN 1551

OMNIPOL

# 24/039 Oil pressure transmitter (to 10 kg/cm²) - LUN 1561

A set of instruments for remote reading of fuel pressure, oil pressure and oil temperature. The whole set as well as individual instruments can be used after a slight modification for measuring the service parameters of internal combustion engines.

OMNIPOL

# 24/040 Electrical flap position indicator LUN 1682 OMNIPOL

#### 24/041

## Flap position indicator transmitter - LUN 1683

The set is manufactured as an independent unit working on D. C. On customer's request may be modified to work in other ranges of angles.

**OMNIPOL** 

#### 24/042

### Undercarriage position indicator LUN 1692

with signal warnings for 2 limiting positions of the undercarriage. To ensure safe operation it has a button enabling a check of bulbs circuit and a damping resistance switch for decreasing the intensity of the illumination.

OMNIPOL

#### 24/043

#### Fuel content transmitter -LUN 1613

A float type fuel content transmitter and fuel content indicator; can be modified for various production tests requiring measurements of liquid contents in tanks on small aircraft. OMNIPOL

#### 24/044

Shunt for VA meter to 30 A or to 60 A

OMNIPOL

#### 24/045

#### Capacity decade XCI

for routine laboratory tests.  ${\it OMNIPOL}$ 

#### 24/046

#### Resistance decade XRI

is with its range, accuracy and permissible loads most suitable for technical measurements and research work in wireless field.

OMNIPOL

#### 24/047

Portable magnetometer Mk 5

OMNIPOL

#### 24/048

#### Laboratory magnetometer Mk 6

With this instrument can be measured all parameters which can be converted to magnetic field measurements. It can be modified for special tasks according to customers' request.

OMNIPOL

#### 24/049

#### Electric thermometer ThT

for measuring the temperature of liquids in vessels or ducts (pipes), temperatures of various machine parts when running, and for a whole range of other tests.

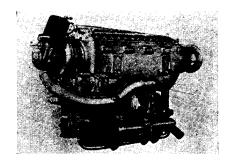
OMNIPOL

#### 24/050

#### Microohmmeter MOds

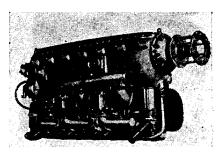
for measuring very resistance values, especially transitory resistance. A modified voltammeter method is here used. The instrument has four test ranges, the basic one being 300 microohms.

OMNIPOL



**24/052 Engine Walter Minor 4-III** 

**OMNIPOL** 



24/053

Engine Walter Minor 6-III

OMNIPOL

24/05

Engine AS 28T for AVIA 14 aircraft, with propeller OMNIPOL

24/056

Propellers 401 E, 401 EK, 411

OMNIPOL

# 25 ELECTRICAL COMMUNICATION ENGINEERING

### 25/001 Radio Transmitters TESLA

remote-operated and remote-controlled transmitter service. The manufacturing programme comprises also numerous smaller short-wave transmitters as well as transmitters for heavy service conditions on ships, air-ports and railways. Television transmitters of small and medium capacities are intended particularly as local sources of television programs.

KOVO

# 25/101 Portable Communication Receivers and Transmitters

serve for mutual communication. Transmitter and receiver form a single unit providing for easy transport. KOVO

#### 25/111 Industrial TV

presents a new item of the exhibition. Its wide range of industrial applications facilitates rationalization of production.



25/131

#### 25/131 Telephone Apparatus TESLA T 57

for public or branch telephone plants with an automatic telephone exchange. A pushbutton enables back calls or to pass the call to some other branch station. The acoustic back coupling is damped by a special connection. KOVO

#### 25/141 Automatic Telephone Branch Exchange TESLA UTU

suitable for 40 to any number of calling stations with any number of public or various fully-automatic or semi-automatic trunk lines.

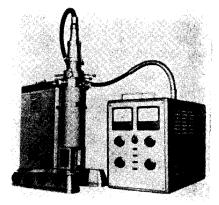
#### 25/161 Profile Regulator TESLA 510813

with a constant impedance of 200 ohms and a regulating range of 60 db. Flat regulating path.

#### 25/171 Small Receiving Set TESLA 517831

Case-type amplifier for quality radio reception with three individual symmetric receiving-circuits of 50—60 ohms which can easily be adjusted to 200—800 ohms. Total amplification 92 db.

KOVO



#### 25/201 25/201 Desk-type Electronic Microscope BS 242

for the examination of various organic and anorganic specimens for the purpose of studying their structure, etc. Observations directly on the screen of the microscope or on the photographs. Maximum enlargement 1: 30,000.

KOVO

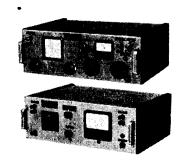
#### 25/211

#### **Decadic Counter BM 353**

for the numerical qualification of impulses originating from radiation detectors. It serves for determining the intensity of radiation and is adjusted for use with GM-tubes.

#### 25/221 H. F. Generator 12 XJ 009

is the source of an a. c. voltage of small distortion. It operates on the beat-frequency principle. KOVO



25/231

#### 25/231 Level Meter 12 XN 012

for measuring small voltage levels, passive and active fourpoles, taking their frequency curves and serving as zero indicator in bridge measurements.

KOVO

#### 25/241 Measuring Set 3 cm

for measuring the conditions on wavecarriers of 3 cm equipments. KOVO

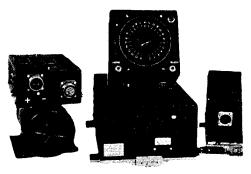
#### 25/261 VKV Railway Despatch Equipment

intended to control the shunting of locomotives in shunting stations (range 10—15 km.). By means of relaying stations this equipment enables the communication between the train dispatcher and the moving locomotives within his district.

#### 25/271

#### Automatic Antenna-Change-Over Switch APA

changes automatically two antennae on the entry of the receiver. KOVO



25/281

#### 25/281 Aircraft Deck Radio Station VVF 25 K

for communication between the airoplane and the ground station in the  $118-128~{\rm mc}$  band. KOVO

#### 25/282 Automatic Aerial Ground Goniometer VKV

serves to locate aircrafts in the 118 to 132 mc band from the ground station.

KOVO

### 25/291 Directional Communication DT 11

long-distance transmission of television picture signals over a distance of up to 500 km. KOVO

#### 25/292 Automatic Deck Radio-Compass

for the automatic location of radio beacons and radio stations on medium and long waves. KOVO

#### 25/293 Mobile Television Relay MR 12

for the transmission of television picture signals from the reporter car or studio into the TV-transmitter. KOVO

#### 25/301 TV-Transmitter TESLA TV 0.6/FM 0.6

will be exhibited in operation. KOVO

#### 25/302 Short-wave Universal Transmitter TESLA KUV 3/5

for telegraph service (A1 and F1) is adjusted for radio distance typing. Exit output 5 kW.



25/311

#### 25/311 VKV Communication Receiver K 13 A

for reception AM (A1, A2, A3) and FM (F3) in the 24—184 mc band with a high frequency-stability. KOVO

#### 25/312 Keying Unit 3 K 5

suitable for the connection of various recording instruments (Teletypewriter, etc.) to all standard communication receivers.

KOVO

#### 25/321 Radio Components

of normal and miniature sizes. KOVO

#### 25/322 Electrolytic Condensers

with screw fixture, suitable for mounting in any position. KOVO

#### 25/323 Ceramic Condensers

of all shapes and materials for the thermal compensation of oscillating and power circuits. KOVO

#### 25/324 Balancing Condensers

with small h. f. losses, air dielectric, easy linear adjustment of the capacity by turning the condenser over more than three times 360°. KOVO

#### 25/325 Potentiometers

layer type, for current applications in radio and amplifying techniques.

KOVO

#### 25/331 Equipment for h. f. Telemetering TESLA VDM 12

suitable to transmit measurements over extreme-high-voltage lines. KOVO

# 25/332 Equipment for Remote Signalisation and Remote-Control TESLA DSO 1

suitable for application in power-despatch rooms and for remote-control of switching stations and hydro-electric power stations.

#### 25/333 Single-channel h. f. Telephone for Power Stations TESLA JVT 2

for duplex telephone communication by means of h. f. waves along extreme-high-voltage lines (110 kV, 220 kV).

#### 26 LABORATORY INSTRUMENTS

#### 26/001

Photo-electric Colorimeter with Two Photo-electric Cells

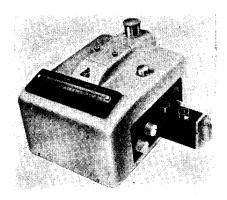
Balanced connection for zero setting, fitted with built-in voltage stabilizer.

KOVO

#### 26/002

MINOR Photo-electric Colorimeter with One Photo-electric Cell

Fitted with built-in voltage stabilizer and disc for insertion of five colour filters. The value of the solvent is automatically checked.



26/003

# 26/003 Photo electric Colorimeter with One Photo-electric Cell

An universal instrument fitted with voltage stabilizer and galvanometer for circular and rectangular cells. KOVO

#### 26/004 MULTOSCOPE III pH Meter

An electronic pH meter directly calibrated in pH units as well as in millivolts. Ranges: 0-8 pH or 0-800 mV, 6-14 pH or 600-1400 mV. Accuracy: 0.1 pH or 10 mV. KOVO

#### 26/005 MULTOBAT II pH Meter

A portable dial pH meter designed for battery operation. Range. 0—14 pH.

KOVO

#### 26/006 MULTOBAT III pH Meter

A portable, battery-operated pH meter with built-in power supply. Fitted with temperature compensator, two ranges for measurement of pH units and millivolts. Ranges: 0—8 pH or 0—800 mV, 6—14 pH or 600—1400 mV.

KOVO

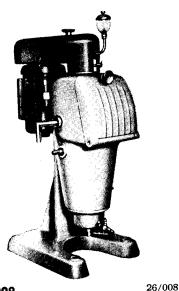


# **26/007 Centrifuge for 36 Butyrometers**

Designed for operation on 220 V A.C. power supply mains. Used for centrifuging milk samples in butyrometers to determine the fat content of milk.

KOVO





#### 26/008 SHARPLESS Centrifuge

A universal, continuous flow-type centrifuge fitted with cooling or tempering worm.

#### 26/009

#### Penning's Vacuum Gauge

A high-voltage discharge type gauge. Range: 0.2—10-6 mm Hg. KOVO

#### 26/010 Flowmeter with Induction Transfer

Intended for indirect measurement. The induction transmitting device ensures remote measurement and recording.

#### 26/011

#### Engler's Viscosimeter

Fitted with temperature control selector of the viscosimeter heating jacket.

Automatic stirring of the tempering bath.

KOVO

#### 26/012 CONDUCTOSCOPE II

An instrument for measurement of conductance of solutions and conductimetric titration. Designed for operation on 220 V, 50 c/s, A.C. mains. Range: 1 ohm - 20 Megohms. KOVO

#### 26/013 MULTOGRAPH

A controlling and recording instrument for measurement of pH even during very difficult working conditions. The instrument is protected against aggressive gases and vapours. KOVO

### 26/014 Electromagnetic Titration Stirrer

The stirrer does not impede the insertion of electrodes, the thermometer and the inlet of titration substances. The instrument permits stirring of solutions in closed and evaruated vessels. Range of r. p. m.: 60—600. Power supply: 220 V, 50 c/s A. C. mains.

#### 26/015 Oil Oxidation Number

Fitted with an intedendent heating device of the reheating tank for keeping temperature constant at 140 °C. A series of water manometres are provided for keeping the oxygen flow constant.

#### 26/016 Portable Smoke Recorder

And instrument for evaluation of exhaust gases of Diesel engines by the amount of suspended burnt particles of oil inside the exhaust tube on a filter paper. Designed for operation on 220 V mains.



#### 26/017 Thermostat

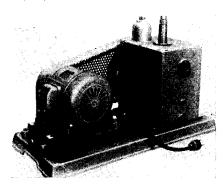
Designed for keeping the temperature of the interior space constant at a temperature set at a required degree within the range of approx.  $+30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

#### 26/018 Oil Diffusion Pump

Pumping speed: 10, 30, 150, 250 and 500 litres per sec. Attainable high vacuum: 10<sup>-8</sup> mm Hg, with freezing 10<sup>-7</sup> mm Hg.

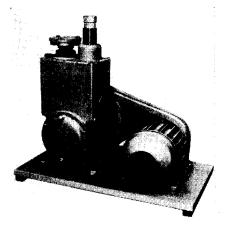
#### 26/019 Rotary Oil Vacuum Pump, No. 1

Pumping speed: 3, 15, 30, 120 m³ per hour. Attainable high vacuum: 10-2 mm Hg. Type RV3 is air cooled, types RV 15, 30, 120 are water cooled. KOVO



26/020 Rotary Oil Vacuum Pump, 7 m<sup>3</sup>/h, No. 2

Attainable high vacuum: 10-3 mm.



#### 26/021 Pumping Unit

A combination of rotary oil vacuum pumps, pumping speed 7 m³ per hour, and of the paraffin diffusion pump, pumping speed 10 litres per sec. A cock and a checking discharge lamp are provided for determining the degree of attained fore-vacuum.

#### 26/022 Metal Coating Unit

Designed for metal coating of various materials with different metals in the vacuum.

#### 26/023 LP 55 Polarograph

A photographic recording polarograph for very accurate analytical examinations and analyses of materials according to the Heyrovsky's classical method. KOVO

#### MICROSKOPY

#### 26/026 MEOPTA S 30 Stereoscopic Microscope

Intended for observation and examination in different medical branches, e.g., gynaecology, colposcopy, ophthalmology, ear, throat and other medical sciences.

#### 26/027 Petrological Microscope

Intended for extensive work in natural as well as polarised light. Magnification:  $12 \times$  to  $1,500 \times$ . KOVO

#### 26/028 MEOPTA A 26 V Microscope, Type 561 09

Fitted with adjustable eyepiece tube and square mechanical stage for complicated laboratory and diagnostic works. Total magnification:  $36 \times$  to  $1,500 \times$ .

# **26/029 MEOPTA A 36 Bi Microscope, Type 561 12**

Fitted with binocular head, coefficient  $1.5 \times$  and square mechanical stage for extensive research and development work. Total magnification: 54x-2,250x.

#### 26/031 MEOPTA A 11 P Microscope, Type 561 01

Fitted with fixed eyepiece tube and circular fixed stage for basic biological studies. Total magnification:  $24 \times$  to  $450 \times$ .

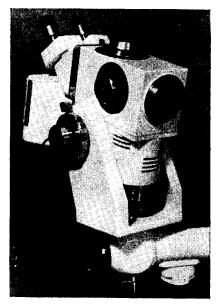
#### 26/032 MEOPTA A 23 P Microscope

Designed for complicated laboratory and diagnostic work. Magnification:  $36 \times$  to  $1,500 \times$ . KOVO

#### 26/033 MEOPTA B 26 S Microscope

Designed for complicated laboraty and diagnostic work. Magnification:  $36 \times 1,500 \times$ .

KOVO



**26/0<b>26** 

#### 26/034 MEOPTA A 23 Bi Microscope, Type 561 13

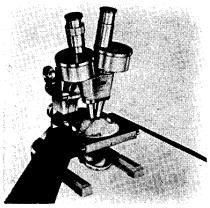
Fitted with binocular head, coefficient  $1.5\times$  and circular centering stage, intended for complicated laboratory and diagnostic work. Total magnification:  $54\times$  to  $2.2500\times$ .

#### 26/035 MEOPTA A 12 P Microscope, Type 561 02

Fitted with fixed eyepiece tube and square fixed stage, intended for biological studies. Total magnification: 24x-450x. KOVO

# **26/036 MEOPTA B 23 S Microscope, Type 562 06**

Fitted with inclined eyepiece tube and circular centring stage for complicated laboratory and diagnostic work. Total magnification:  $36 \times$  to  $1,500 \times$ . KOVO



# **26/037 MEOPTA** G 11 P Stereoscopic Microscope, Type 563 01

This microscope, fitted with tiltable stand, ensures direct view of stereoscopic observation in passing and incident light. Total magnification:  $10.8 \times$  to  $100 \times$ .

# **26/039 MEOPTA** C 36 Bi Microscope **Type** 562 43

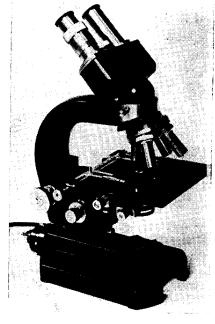
The foot of the stand is fitted with a small illuminator. The microscope is provided with binocular head, coefficient  $1.2\times$  and square mechanical stage. Total magnification:  $43\times$  to  $1,800\times$ .

#### 26/040 MEOPTA PA Polarizing Microscope, Type 565 03

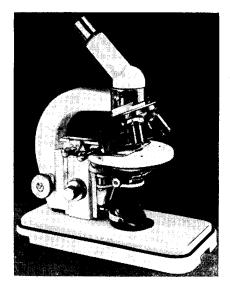
Intended for extensive examination when carrying out observation in polarized or natural light with the possibility of conoscopic viewing and accurate measurement. Total magnification:  $12 \times$  to  $625 \times$ .

#### 26/041 MEOPTA BC 28 SV Travelling Microscope, Type 562 21

A portable microscope with inclined adjustable eyepiece tube, circular fixed stage and mechanical slide carrier. Total magnification:  $36\times$  to  $2,000\times$ . KOVO



26/039

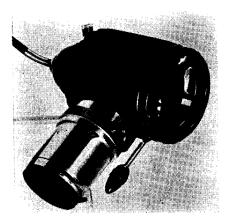


#### 26/042 MEOPTA Phase Contrast Device, Type 579 03

A supplementary device of accurate microscopes designed for the new microscopic observation technique. KOVO

#### 26/043 MEOPTA Bürker's Haemocytometer Chamber

Fitted with Bürker's ruling, intended for counting of red and white corpuscles and blood platelets. KOVO



26/044

#### 26/044 MEOPTA "N" Microscope Lamp

Used for illumination during microscopic observation in passing light. The lamp is fitted with a low-voltage bulb but with high light output. Can be connected to the power supply mains via a transformer.

KOVO

#### 26/045 MEOPTA Paraboloid Condenser

Used for microscopic observation in the so-called dark field, when even the most minute particles and micro-organisms give very contrasting images. KOVO

# 26/046 MEOPTA "P" Petrological Mechanical Slide Carrier

A supplementary device of the polarizing microscope, type PA 565 03, used

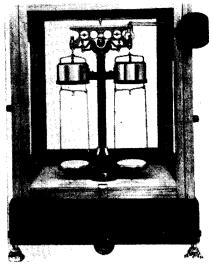
for continuous setting of the petrological specimens.

# 26/047 MEOPTA SMA Semi-MicroAnalytical Balance, Type 163 01

Designed for very accurate weighing in laboratories. Maximum capacity: 100 g, sensitivity: 0.01 mg. KOVO

# 26/048 MEOPTA A 3 Analytical Balance, Type 165 01

Designed for very accurate weighing in laboratories. Maximum capacity: 200 g, sensitivity: 0.1 mg. KOVO



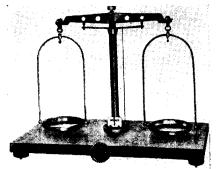
26/049

#### 26/049 MEOPTA A 1 Analytical Balance, Type 163 02

Designed for very accurate and rapid weighing in laboratories. Maximum capacity: 200 g, sensitivity: 0.1 mg.

# **26/050 MEOPTA T** 1/100, 200, 500 Technical Balance, Type 154 01-03

Designed for accurate weighing in works laboratories and research institutes.



26/050

# MEOPTA T 2/1000, 2000, 5000, 10,000 Technical Balance, Type 154 04-07

Intended for accurate weighing in works laboratories, research institutes, etc.

#### MEOPTA T 3 Technical Balance, Type 158 31

Designed for determination of water content in butter. Maximum capacity: 100 g, sensitivity: 2 mg. KOVO

# **26/051 MEOPTA** K 1 Torsion Balance, Type 152 01-13

Designed for determination of very minute quantities of various materials. Weighing range (according to the type of balance: 1 mg-10 g, sensitivity: 0.002-20 mg KOVO

#### 26/052 METRA Wedge-type Polarimeter, Type 62011

Also called saccharimeter, used in sugar refineries for concentration determination of sugar solutions. KOVO

#### 26/053 METRA Circular-type Polarimeter, Type 62010

Used to determine concentration of optically active substances in sugar industry, medicine, chemistry, fodstuff and cosmetic industries. KOVO

#### 26/054 METRA "Simplex" Polarimeter, Type 62004

Used for examination of different solutions in medicine. KOVO

#### 26/055 METRA Stammer's Colorimeter, Type 62500

An optical instrument for checking the density of sugar juices and solutions in sugar refineries. KOVO

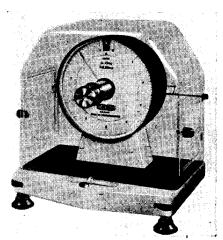
#### 26/056 METRA White Light Lamp

An accessory of the wedge-type polarimeter-saccharimeter, fitted with a standard electric incandescent lamp.

KOVO

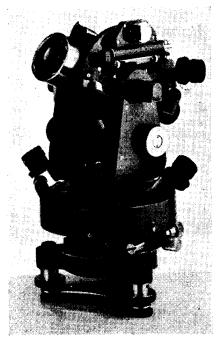
#### 26/057 METRA Sodium Light, Type 62013

Supplied as an accessory of the polarimeter, ensures yellow chromatic light. KOVO



# **26/058 MEOPTA TH Theodolite 30\times, Type 605 04**

A universal goniometric repetition instrument fitted with a detachable tripod and metal circles, intended for lowerorder triangulation. KOVO



26/059

# **26/059** MEOPTA THO Theodolite $30\times$ , Type $605\ 07$

A universal goniometric repetition instrument, fitted with a detachable tripod and metal circles, intended for lowerorder triangulation, suited for underground surveying work. Electrical illumination is provided for work at night.

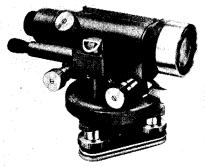
KOVO

#### 26/060 MEOPTA T 1 X, Theodolite, Type 605 05

A universal repetition instrument, fitted with detachable tripod and glass circles, intended for lower-order triangulation. Electrical illumination is provided for work at night.

#### 26/061 MEOPTA Pilot Balloon Theodolite Type 605 10a

Used for tracking pilot balloons; gives the direction and strength of the wind at different heights.



# **26/062 MEOPTA NK Surveyor's Level** $30\times$ , Type 603 04

Intended for levelling work, surveying of level ground, for measuring deformations, etc.

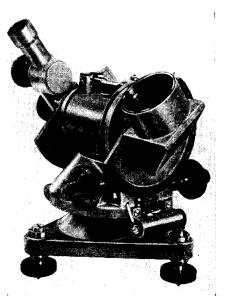
KOVO

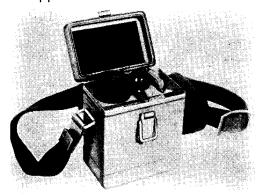
#### 26/063 MEOPTA Universal Optical Square, Type 601 06

Used to mark out lines perpendicular to lines, plotting of lines, location plans and for rough determination of contourlines.

KOVO

26/063





#### 26/068

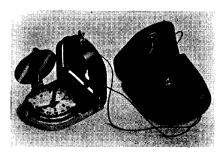
#### Universal Anemograph 957

an instrument for indication and recording wind direction, as well as momentary and average wind speed.

KOVO

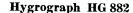
#### 26/069 Radio Meteorological Set 971

in connection with meteorological instruments for determination of barometric conditions in high atmosphere. A set of instruments for meteorological stations.



#### 26/070 Thermograph 871

Serves for recording ambient air temperature.



Serves for recording of relative air humidity.

#### Barograph BG 197

Serves for recording of barometrical pressure expressed in 1 mm Hg equals 1 mm on recording chart.

#### Microbarograph MIBG 183

Serves for recording changes of barometric pressure expressed in 1 mm Hg equals 2 mm on recording chart.

KOVO

26/070

#### THHG 851 Thermo-Hygrograph

Designed for recording air temperature in the room and simultaneously the relative humidity of the air.

#### 26/064 26/064 MEOPTA BÉZARD Compass, **Type 114 01**

An instrument for indicating the four cardinal points, for orientation in the field, for determining the marching direction, for orienting maps, etc. KOVO

#### 26/065 MEOPTA Geological Compass. Type 114 02

Used for geological-magnetic investigation works. KOVO

#### 26/066 MEOPTA NK Surveyor's Level $10\times$ , Type 603 05

Used for rough levelling work when surveying building plots, railway dams,

#### 26/067 Refractometers

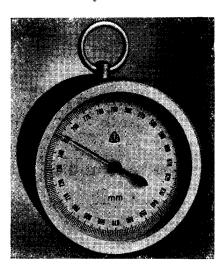
are used for determination of index of refraction of examined liquid. KOVO

#### HEL 875 Heliograph

Used for recording the time and duration of sunshine. KOVO

#### PM 885 Psychrometer

Used for accurate determination of the relative humidity of the air. KOVO



#### AN 835 Aneroid, Small Type

An instrument for measurement of atmospheric pressure. Range of dial: 560--790 mm Hg. Accuracy of measurement: 0.2 mm Hg on 10 mm Hg. Temperature compensation:  $-30^{\circ}$  to  $+50^{\circ}\text{C}$ . KOVO

#### ANV 836 Aneroid, Large Type

Used for measurement of barometric pressure. The instrument is suspended on steel springs in a portable case. Range of dial:  $500~\rm mm~Hg$  -  $800~\rm mm~Hg$ . Accuracy of measurement:  $0.1~\rm mm~Hg$  on  $10~\rm mm~Hg$ . Temperature compensation:  $-35^{\rm o}$  to  $+50~\rm ^{\rm o}C$ . KOVO

#### RSM 827 Recording Vane

Used for indication of the wind direction. Range: 4 main and 4 secondary directions, 1 revolution of the recording drum: 12 hours, 7-day clockwork.

#### AR 950 Hand Anemometer

Used for measurement of momentary wind velocity. Range: 0-25 m/sec.

KOVO

#### ARH 953 Three-Pointer Anemometer

Used for wind measurement within a certain period. KOVO

### HM 883 Hygrometer with Thermometer

Used for measurement of relative air humidity. KOVO

#### HMK 884 Chamber Hygrometer

Used for measurement of relative air humidity in incubators. KOVO

#### 890 Ombrograph

Used for automatic recording of rainfalls. 1 mm of rainfall = 5 mm plotting on the recording chart. The recording drum revolves once in 26 hours. KOVO

#### 26/071 METRA Limnigraph - Remote Transmitter, Type 66525

Used for checking variations of water level. When water level is changed, electric impulses are sent out to the remote receiver.

#### 26/072 METRA Recording Limnigraph -Receiver, Type 66542

Used for recording the water level. It receives electric impulses of the remote transmitting limnigraph, type 66525.

KOVO

#### KOVOEXPORT,

Czechoslovak Export Magazine of the Czechoslovak Light and Precision Engineering Industry.

# 27 ELECTRONIC MEASURING INSTRUMENTS

#### 27/001

#### Work-shop Oscillator Tesla BM 205

designed for balancing h.f. circuits and for controlling the selectivity and sensitivity of receivers. Frequency range 94 kc to 30 mc divided into 5 subranges.

#### 27/002

#### A. C. Stabiliser Tesla BM 206

operates with magnetically saturated iron and is assembled from elements, which are partly in resonance. Maximum load 300 W. Output for loads of 100, 200 and 300 W. KOVO

#### 27/003

#### L. F. Millivoltmeter TESLA BM 210

for measuring small voltages in the frequency range of 20 c/s to 30 kc. The measuring range of 0.003 to 300 V is divided into 10 subranges. Accuracy  $\pm$  3 per cent within the range of 30 c/s to 20 kc.

#### 27/005

#### Feeding Source Tesla BS 275

with the following voltages brought out for heating electron tubes:  $2\times6$  3/2A, 12.6 V/1A, 4 V/3A. Anode voltage within the range of 0 to 700 V at abt. 100 mA consumption.

#### 27/006

#### Teraohmmeter Tesla BM 283

for measuring large resistances and isolation resistances within the range of  $10^5$  to  $10^{13}$  Ohms. The accuracy of measurements is abt. 10 per cent.

#### KOVO

#### 27/007

#### Short-circuit Meter Tesla BM 285

for the detection of short-circuit between the turns of transformer coils, amplifier coils, h. f. coils, etc. Measuring frequency abt. 900 c/s. KOVO

#### 27/008

#### Voltohmmeter Tesla 289

for the measurement of D. C. and A. C. voltages and resistances. It measures

D. C. voltages up to 6 kV, and A. C. voltages up to 300 V (20 c/s. to 50 mc). Errors of indication: D. C. voltages 3 per cent, A. C. voltages 5 per cent. Range of the ohmmeter 0 to 200 megohms, error of indication ± 5 per cent.

#### 27/009

#### RLC Bridge Tesla TM 393

for measuring resistances, capacitances and inductances. Ranges: Resistances 0.01 to 10 megohms inductances 10  $\mu$ H to 1000 H, capacitances 1 pF to 100  $\mu$ F'. The accuracy for R and C is  $\pm$  2 per cent, for L  $\pm$  3 per cent. KOVO

#### 27/010 Absorption Wavemeter Tesla

#### BM 307

for quick measurements of the frequency range 100 kc to 50 mc. Accuracy  $\pm$  2 per cent.

#### 27/011

#### Electronic Changer Tesla TM 557

for the observation of two simultaneous phenomena on an oscillogram. The change-over frequency can be adjusted gradually within the range of 30 c/s to 50 kc. The frequency range of amplifiers is 30 c/s to 150 kc. KOVO

#### 27/012

#### Oscillogram Tesla TM 694

for the observation of instantaneous periodic electrical phenomena. Frequency range 20 c/s to 500 kc. Incoming impedance 50 kiloohms, or when using the divider  $1:10,\ 0.45$  megohms/4 pF. Maximum D. C. component 250 V.

#### KOVO

#### 27/013

#### Tesla BM 208 D. C. Source

Source of D. C. voltage suitable to be regulated within the range of 0 to 250 V at 300 mA load, or 0 to 500 V at 240 mA load. The panel accommodates also the voltages for heating standard electron tubes and the A. C. voltage regulated within the range of 0-250 V.

#### 27/014 Q-Meter up to 30 Mc/s Tesla RM 211

measures the electrical quality of coils, may also be used to measure inductances and capacitances and to ascertain the losses of condensers and dielectric materials. Measuring range of Q from 0 to 450 in two ranges. Accuracy of the measurement ± 5 per cent. Capacitances can be measured from 0.1 pF to 450 pF directly with an accuracy of ± 3 per cent.

# **27/015 Q-Meter 30 to 200 Mc/s Tesla BM 220**

Laboratory measuring instrument intended to measure the electrical quantity of coil and condensers within the frequency range of 30 to 200 mc.

KOVO

#### 27/016 AM Generator Tesla BM 223

Laboratory h. f. measuring generator for various measurement on h. f. circuits. It operates within the frequency range

of 30 kc to 30 Mc/s and is particularly suitable for laboratory measurements on radio receivers, etc. KOVO

## **27/017**Video-Generator Tesla BM 286

for measuring and trimming wide-band amplifiers. Frequency range 10 c/s to 10 Mc/s. Distortion 5 per cent at 5 V incoming voltage.

#### 27/018 Frequency Substandard Tesla BM 287

This is a high-precision source of the high frequency of 100 kc/s and six derived frequencies obtained by subdivision for the purpose of comparing frequencies at from 10 c/s to 1.5 Mc/s.

#### 27/019 Distortion Meter Tesla BM 224

for direct measurements of the percentage distortion of amplifiers, receivers, generators etc. Readings within the range of 0.1 to 100 per cent in five subranges.

KOVO

#### 28 DIAL MEASURING INSTRUMENTS









28/005

#### 28/001-003 DHR 3, DHR 5, DHR 8 Small Switchboard Instruments

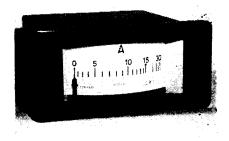
Designed for flush mounting; intended for measuring D. C. currents and voltages (, A).

KOVO

#### 28/004 EHi 5

#### Switchboard Instruments

Designed for flush mounting, square pattern, intended for measuring A. C. currents and voltages (V, A). KOVO











#### 28/005 EPpi 4, EPp 6

#### Switchboard Instruments

The same as above but edgewise pattern (V, A) KOVO

#### 28/006 GIIHi 5

#### Wattmeter Switchboard Instrument

Designed for flush mounting, square pattern, for measuring A. C. power.

KOVO

#### 28/007 CHi 5

#### **Power-Factor Meter**

The same as the former. Serves for measuring power factor in A. C. single and three-phase systems with lagging and leading loads.

KOVO

#### 28/008 KH i5

#### Frequency Meter

Used for measurement of power frequencies in A. C. systems (resonance system). KOVO

#### 28/009-014 Ship Instruments

Built in sturdy casings, designed to operate under especially heavy duty conditions. Flush-mounted, square pattern

### EHR 16/L Voltmeters and Ammeters

For measurement of A. C. currents and voltages.

#### KKHR 16/L Double Frequency Meters

Used for measuring technical frequency in two independent A.  $\bar{C}$ . systems.

#### GIIHR 16/L Wattmeters

Used for measuring A. C. power.

#### CHR 16/L Power Factor Meters >

Used for measuring power factor in theree-phase A. C. systems

#### SyHR 16/L Synchroscopes

Serves for checking revolutions of electric apparatuses with parallelling switching.

#### oDsHR 16/Lc Revolution Connters

Used for remote speed indication. Pointer deflection 240°. KOVO

#### 28/015 Laboratory Instrument ELi

Laboratory voltmeters and ammeters for measurement of A. C. voltages and currents. Degree of accuracy: 0.5%.

#### 28/016 Laboratory Instrument DLi

Laboratory voltmeters and ammeters for measurement of D. C. voltages and currents. Degree of accuracy: 0.5%.

#### 28/017 Laboratory Instrument Ott.i

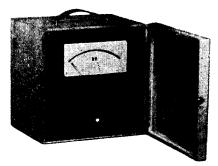
Used for radio-frequency measurement of voltages and currents. Degree of accuracy: 1.5%. KOVO

### 28/018 SLi Current transformer

Used for increasing the basic current ranges of PLi or GLi wattmeters.

KOVO







# 28/019 Electrodynamic Wattmeter PLi

Laboratory type designed for measurement of A. C. and D. C. power (portable). Degree of accuracy: 0.5%

#### 28/020

### Ferrodynamic Wattmeter

Portable, designed for measurement of A. C. power. Degree of accuracy: 0.5%.

KOVO

#### 28/021

#### Series Resistor RLiG

Used to increase the voltage range of the GLi ferrodynamic wattmeter, 60 to 600 V (portable). KOVO

#### 28/022

### Synchronizing Bracket RSyO

Used for parallel test switching of alternators. KOVO

#### 28/023

# Laboratory Accurate Electrodynamic Measuring Instruments PSLL

For accurate measuring of A. C. currents and voltages. Degree of accuracy: 0.2%. (Voltmeters, ammeters or wattmeters.)

#### 28/024

### Laboratory Instruments

Designed for accurate measurement of D. C. voltages and currents. Degree of accuracy: 0.2%. (V. A.) KOVO

## 28/025 CLL Laboratory Phase Meters

Used for measurement of power factor in A. C. systems (Power-factor meters).

KOVO

#### 28/027

#### KLL Laboratory Frequency Meter

The same as the former but used for accurate measurement of frequency within the range 25—105% (Resonance system). Degree of accuracy: 0.5%.

KOVO

#### 28/028 Terromet

A small and light measuring instrument of earth resistance. KOVO

#### 28/029 Megmet

An insulation tester.

KOVO

#### 28/030 Unimet

A universal measuring instrument used in workshops and laboratories. Designed for measurement of D. C. and A. C. voltages and currents, resistance, capacity and power output. Fitted with 43 measuring ranges. KOVO

#### 28/031 Avomet

A small universal measuring instrument adapted for installation work, designed for measurement of D.C. and A.C. voltages and currents. Fitted with 32 measuring ranges.





28/024





28/039

28/028 **28/032** Omega —

Small Wheatstone bridges for reasonably accurate measurement of ohmic resistance. KOVO

#### 28/033 Omega 1 —

Wheatstone bridge used for measurement of ohmic resistance of max. 50.000 ohms. KOVO

#### 28/034 Omega II —

Wheatstone bridge used for measurement of electrolytic resistance.

KOVO

#### 28/035 Omega III —

Thomson bridge used for measurement of small ohmic resistance from 0.0001 to 20 ohms.

#### 28/036 Pyromet

Optical pyrometer for measuring high temperatures without direct contact with the measured material. KOVO

#### 28/037 Nulomet

An instrument for checking electrical circuits provided with zero protection.

KOVO

#### 28/038

#### Small Installation Potentiometer

Used for measurement of very small voltages (max. 80 mV) without current loading the measured source. KOVO

28/037 28/039 Thermomet

A small and light instrument for measuring values of thermo-couples in mV or centigrade degrees (°C). (Thermo-

couples: Fe-Ko, PtRh-Pt, NiCr-Ni.)

KOVO

#### 28/040 Icomet

A small portable bridge for measurement of inductance, capacity and ohmic resistance, KOVO

# 28/041 Qw III Encased Set of Instruments,

transformers, switches and resistors for measurement of power, voltage, current in single or three-phase systems. KOVO

#### 28/042 Sensivite Mirror G

### Sensivite Mirror Galvanometer DGrz

with suspended coil, fitted with pointer and mirror, designed for measurement of very small currents and voltages.

KOVO

#### 28/043

### OS 20 Illuminating and Reading-off Set

for mirror galvanometers.

#### KOVO

#### 28/044

#### Small Pointer Galvanometer DG

40 ohms, designed for measurement of very small current values, no deflection when measuring with the use of zero methods.

KOVO

#### 28/045 Clip-on Ammeter Skr 86

Designed for measurement of A. C. currents without opening the circuit. Safe measurement in systems with working voltage of 22 kV.

KOVO

#### 28/046-047

Ammeters to be used with the clip-on ammeters. (Ammeters with range selection of up to 1000 A.) KOVO



#### **28/048** 28/048 Small Clip-on Ammeter DSK **65**

with change-over switch for different current ranges. Possibility of measurement in systems with working voltage of up to 650 V. KOVO

### 28/049

Small Rotary-Switch Decade Resistance Box XL

KOVÓ

#### 28/050

Large Precision Plug-Type Decade Resistance Box XLL

KOVO

KOVO

#### 28/051 Large Precision Plug-Type Decade

Resistance Box XLIX

#### 28/052 MLG

Small rotary-switch Wheatstone bridge with built-in galvanometer designed for reasonably accurate measurement of ohmic resistance.

KOVO

#### 28/053 MLL

Large rotary-switch Wheatstone bridge designed for accurate laboratory measurements.

KOVŌ

#### 28/054 MLLk

The same as the former but a plug-type pattern. KOVO

#### 28/055 MGK

Small Cable Bridge with built-in galvanometer, designed for fault localization of low-current cables. KOVO

#### 28/056 QTK

Industrial Potentiometer designed for accurate measurements of D. C. voltages of up to 600 V; measurement of the e.m. f. of thermo-couples; calibration and checking of electrical measuring instruments; measurement of resistance by means of resistance standards.

KOVO

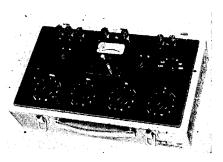
#### 28/057 NTW

Large Rotary-Switch Precision Bridge, combination of the Wheatstone and Thomson bridges. KOVO

#### 28/058 QmDs

Set of instruments used to determine resistance of earth systems (Checking of safety of electrical apparatuses and appliances). KOVO

28/052



#### 28/059 VPK

Voltmeter change-over switch for successive switching of several voltage circuits when measuring with one voltmeter.

KOVO

#### 28/060 Tgm

Pressure switch with rubber diaphragm for switching on/off of electromotors of air compressors and in waterworks during overpressure or pressure decrease. KOVO

#### 28/061 RN Resistor Standards

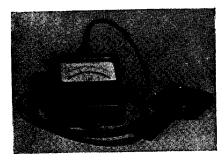
designed for very accurate measurement of resistance as primary standards (resistance units). KOVO

#### 28/062 W 100 Weston International Standard Cell

KOVO

#### 28/063 QIK

Large Laboratory Potentiometer. When using the accessories (Weston standard cell, resistance standard) very accurate measurements, with the use of compensation method, of D. C. voltages, currents and ohmic resistance can be carried out.



#### 28/064 QsIK

Laboratory potentiometer table designed for very accurate measurements of D. C. voltages, currents and ohmic resistance. KOVO

#### 28/065 QEK

Clip-on ammeter for measurement of D.C. and A.C. currents without opening the circuit in systems with working voltage of max. 650 V. KOVO

#### 28/066 OPK

Cylindrical sliding resistors, used where it is required to connect a variable resistance into a circuit for purposes of current control.

KOVO

#### 28/067 OOPK

The same as the former but fitted with a double cylinder. KOVÖ

#### 28/068 E 67

School Instrument for example measurement of D. C. currents and voltages.

KOVO

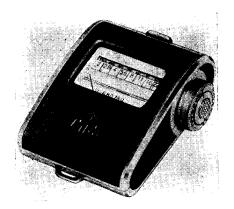


#### 28/069 Switchboard Measuring Instruments

intended to be mounted in panels. Circular scales, pointer deflection 240°. Used for measurement of D.C. and A.C. currents and voltages, power, and remote speed indication.

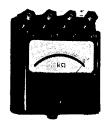
#### 28/070 Exposure Meter

Used to determine effective aperture of lenses and exposure times in photography. KOVO



28/070







28/069

28/040

#### 29 VACUUM TECHNIQUE

#### 29/001 Electron Tubes

all-glass of standard design, miniature battery tubes with reduced heating input, miniature line tubes for series and parallel heating, modern noval line electron tubes for use in radios and TV-s, amplifying electron tubes of high and small capacities.

Vacuum and mercury rectifying electron tubes, electronic indicators tuned for all types of receivers, transmitting electron-tubes of small outputs up to a frequency of 200 Mc/s, screens for oscillograms and TV-s, recording electron tubes, supericonoscope used for television cameras, quanticon — for industrial television, monoscope — test picture KOVO

#### 29/002 Voltage and Current Stabilizers

miniature type, special electron tubes for measurements and allied purposes, phototubes — in which variations in applied light cause corresponding variations in electron emission, Geiger-Müller tubes used for measuring radioactivity and cosmic rays. KOVO

#### 29/003 Microwave Electron Tubes:

klystrons, magnetrons, ion tubes for radio locators; semi-conductor components: germanium point diodes in glass, flat germanium rectifiers for various voltages and currents 0.3 A and 0.5 A, germanium phototubes — semiconductive triodes dependent on light, transistors — 25 and 50 mW for l. f. purposes.

#### 29/004 Lamps

for illumination, railways, aircraft, vehicles, medical, projection, drying, photography, mines, *glowlamps*, signalling and stabilising, *fluorescent lamps* 20 W, 25 W, 40 W for illumination. KOVO

#### 29/005 Thyratrons 25 kW/1000 A

of current. The maximum value of the controlled output is 12.5 MW.

#### 29/006

Tacitron 80 mA and 500 mA

This is a thyratron with a special construction of the grid enabling to interrupt the burning discharge by applying a negative potential to the control grid (negatively biased grid).

#### 29/007

Rectifying Discharge Tube with a cold cathode 2 kW/4 mA

This is a valve used to rectify high voltages ranging from industrial to acoustic frequencies. Its properties make the valve particularly suitable for all sources of high voltage (requiring no heating-coil and, consequently, no insulation of the H. T. side of the transformer). This discharge valve is of the miniature high voltage type.

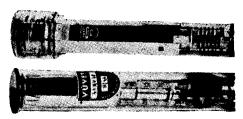
#### 29/008

Rectifying Discharge Tube with a cold cathode 1 kW/100 uA - 13 TA 9:

subminiature type, fielled with argon, This tube can be applied for measurements of alternating currents ranging from industrial to acoustic frequencies. Its characteristic values make it suitable for high-voltage sources in special transmission plants.

#### 29/009 Screen 181 QP 44/M

for electronic finders of TV cameras, control monitors and industrial television applications. Useful screen area  $105{\times}140$  mm.



#### 29/010 **29/010**

Quanticon 41 QV 40

This is a recording electron tube operating on the photoconduction phenomena. The split electron-tube is brought by the recording ray to the potential of the cathode. Outer dimensions:  $25 \times 165$  mm.

# **29/011**Resisticon 63 QK 41

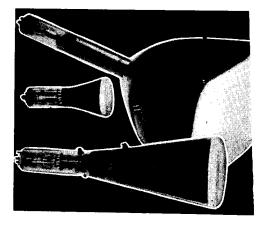
is an accummulating recording electron tube with a rapid beam. Applied for recording in studios and for transmission. It has a good ratio between signal and hum also in only slightly illuminated sceneries.

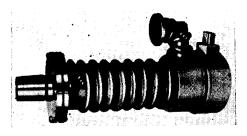
### **29/012** Superorthycon 61 QM 40

is a recording electron tube with a slow ray used for slightly illuminated sceneries.

29/009

29/012





29/013

### 29/013 Oil Diffusion Suction-Pump

This suction pump of 500 to 5.000 litre/sec pumping speed with its control valve block and gauges forms a complete vacuum unit for evacuating

metallized equipments and vacuum de-aerating and metallurgical furnaces. It is also used in atomics.

#### 29/014

Vacuum Unit 500 litres/second

Pumping speed 500 to 700 litres/sec. Final vacuum (without freezing)  $< 2.10^{-6}$  mm Hg. Admissible starting vacuum 0.1 to 0.3 mm Hg.

# 29/015 Oil Diffusion Suction-Pump 500 litres/second

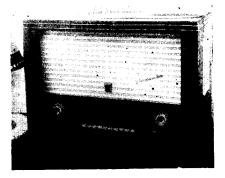
Pumping speed 5000 to 8000 litres per second. Admissible starting vacuum 0.1 to 0.3 mm Hg. Final vacuum  $<2.10^{-6}\ mm$  Hg.

# 30 RADIO RECEIVERS — RADIO-GRAMS — MAGNETIC RECORDERS

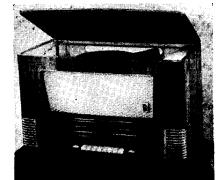
## **30/001-030**Table Receivers

are modern superhet receivers in boxes made of plastics or polished wood; besides standard wave ranges, numerous types are also equipped for receiving frequency modulated radio transmissions, and are provided with changeover pushbuttons, a ferrite antenna and efficient control of high and low tones. A high-quality tone is guaranteed by means of several loudspeakers.

KOVO 30/031-050



30/001-030



# **30/031-050 Table Radio-grams**

of various sizes for radio reception on standard wave bands as well as for reproducing gramophone records. KOVO

#### **30/051-060** Musical Boxes

present suitable furniture supplements. They are used for the reception of radioprogrammes as well as for the reproduction of gramophone records. The boxes are designed for superbacoustics and accommodate the chassis, the modern three- or four-speed gramophone and the magnetic recorder. The carefully selected reproducing combination guarantees top class reproduction of musical programmes. KOVO

# **30/061-080**Portable Case-type Receivers

according to choice either portable for various wave ranges or hand-bag type for the reception of medium waves, are of modern design, in two-colour cabinets made of plastics.

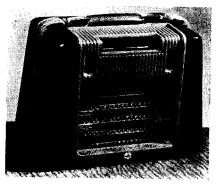
The receivers are fitted with modern valves of small power consumption and ferrite aerials. They can be connected to the mains (hand-bag receivers by means of a special equipment).

#### 30/081-100 Magnetic Tape Recorders

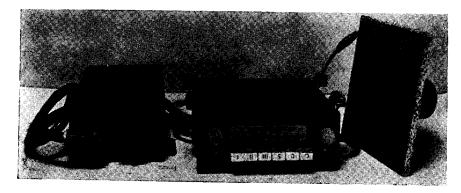
for recording and reproducing sound are mounted in an elegant case; they enable double imprint records at speeds of 19.05 and 9.5 m/sec and quick transport of the tape in both directions. They are provided with connectors for a modulating line and a headphone. The Magnetic-Recorder Adaptor can be used in conjunction with all standard gramophones. It enables double-imprint records at a tape speed of 19.05 m/sec.



30/051--060



30/061---080





Ofganic and norganic chemical product.

Far dynatuffs.

Synthetic resins.

Fine chemical pharmacoutical products and intermediates.

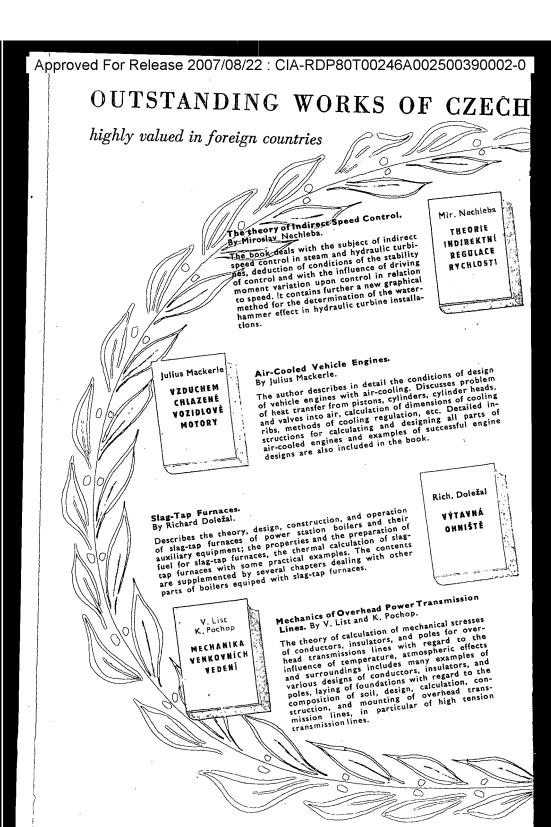
Dental products.

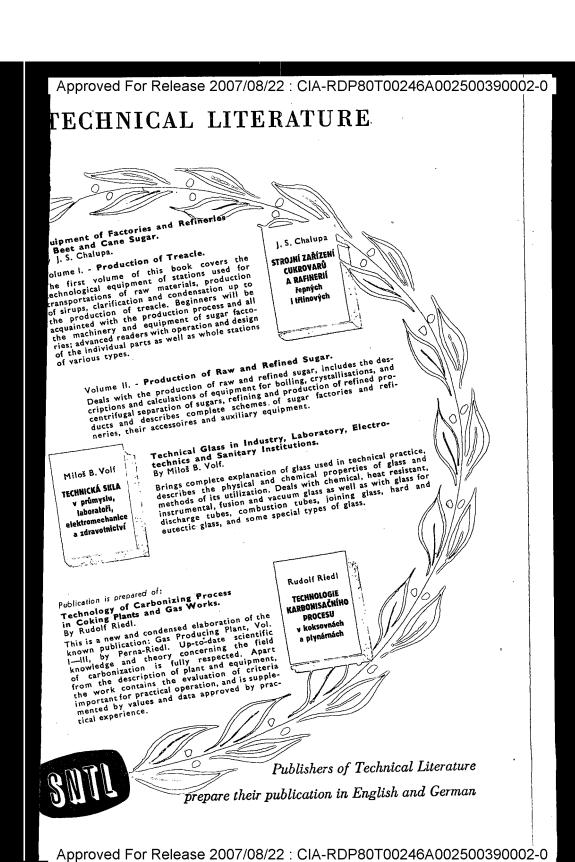
etc.

call.



FRAHA CZECHOSŁOVAKIA





# OMNIPOL Ltd.

PRAGUE 3, Washingtonova 11 CZECHOSLOVAKIA

# EXPORT AND IMPORT OF SPORTS AND TRANSPORT AIRCRAFT AND SPORTS AND HUNTING ARMS



Sports and Tourist Aircraft
Training Aircraft
Sailplanes
Transport Aircraft
Aircraft Engines
Propellers
Aircraft Instruments

Sports Arms
Hunting Arms
Ammunition
Pyrotechnical Goods

#### 31 TELEVISION SETS

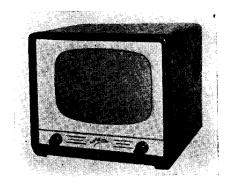
### **31/001 TV Sets**

of the table or stand type for the reception of television programmes. According to the quality class they have screens of 36, 43 and 53 cm diagonals and different numbers of reception channels.

#### 31/002

#### **Television Aerials**

KTA 3/70 for receivers up to a range of 60 km or 37.3 m. KTA 1/70 for receivers up to a range of 15 km or 9.32 m. KTA 6/24 for receivers of foreign television programmes.



31/001

#### 32 REPRODUCTION EQUIPMENT

#### 32/001 Reproducers of the Standard Sories

are divided in normal type "O", elliptical "E" and pressure (altitude) type "T". The common feature of all reproducers of the standard series is the wide frequency range and the suppressed subharmonic oscillations. A special type is the listening crystal reproducer, the so-called whisperer.

KOVO

#### 32/002 Box Reproducers

applied in local transmission for installation in various reproducing systems of the standard series with an adjusting transformer for a 100 V system. KOVO

#### 32/003 Directional Reproducers

applied in local transmission for installation in out-of-door spaces. Reproducers with standard systems for an input of 6 and 12,5 W are provided with an acoustic system in suitably damped double walls. The enclosures of the reproducers accommodate the adjusting transformers for the 100 V system.

# **32/004**Home-Combinations of Reproducers "Hi-Fi"

are self-contained units assembled from several reproducer systems. By their faithful reproduction and frequency range these combinations fulfill all conditions of high-quality reproduction.

KOVO

# 32/005 Reproducer Combinations for Sound Cinemas

operate on the cell principle with reproducer systems of the standard series in an enclosed housing. KOVO

# **32/006 Microphone with Accessories**

for application in local transmission. Dynamic crystal or reporting types (particularly for transmission from noisy surroundings). KOVO

#### 32/007 Crystal Pick-Up

The crystal pick-up with a crystal of Seignett salt is intended for quality-pick-up of gramophone records with standard grooves and micro grooves. The pick-up has a wide frequency, small pressure on the point and a small side stiffness. KOVO

#### 32/008

#### Electro-Acoustic Earphones

for deafish persons, equipped with electron tubes. It is assembled from three parts: the amplifier with the microphone, the battery holder and the ear-

phone. This device can be adjusted to the individual needs of the user by gradually varying the amplicification by means of the potentiometer or by adjusting the change of the frequency graph by means of the correction changer.

KOVO

### 32/009 Magnetic Tape Recording Adaptor

for recording audio programmes on a magnetic tape in conjunction with a gramophone which drives the tape, and a radio receiver for the reproduction. The play time is twice 15 minutes.

KOVO

#### 33 PHOTO — CINE — OPTICS

#### 33/001

#### Spectacle Frames and Sun Goggles

Sun goggles of various shapes and colours made from polyamide with orientated hinges, practically indestructible (Czechoslovak patent). Spectacle frames of celluloid, frames with adornments or combined with metals, frames of synthetic glass (plexi-glass) and acetate-cellulose. KOVO

#### 33/029 Club Projector 16

A sound projector for 16 mm film, with sound head and a possibility of reproduction of both optical and magnetic film records; the magnetic recording provides the possibility of home-made sound records.

### 33/030 Diaprojector $6\times6$

for projecting of  $6\times 6$  cm diapositive slides. KOVO

#### 33/031 Meopton I

Professional-type stationary sound projector for 16 mm film with adapter for slide projection. Available with a POLAR lens f/1.3, (or f/1.5), F=40 mm or 60 mm, respectively. Dustproof projector head, 1000 W projection bulb. KOVO

#### Meopton II

Professional - type grand - performance stationary sound projector for 16 mm film; for small-type public cinemas and lecture halls. KOVO

#### **Meopton III**

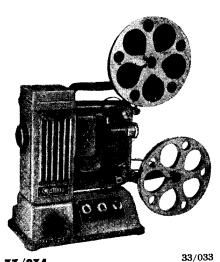
New professional-type stationary sound projector for 35 mm film; fully encased; for medium-size cinema halls intended for 400 spectators approx. Available with lens of various systems, speeds and focal lengths according to the given hall requirements. KOVO

#### 33/032 Projector Reel

for 8 mm, 16 mm and 35 mm films in various capacities. KOVO

### **33/033** Optilux

Cine projector for 8 mm film designed for amateurs, institutes and schools, with a 500 W projection bulb, a POLAR lens f/1.3, F=25 mm. Fitted with reverse run: it is supplied with an autotransformer for conventional mains voltages from 110 V to 240 V.



33/034 Opemus 4×4

Amateur-type precision enlarger, with oblique rod, for negatives up to  $4\times4$  cm in size, BELAR lens f/4.5, F = 55 mm, plano-convex condenser 58 mm in dia. KOVO

#### 33/035 Opemus 6×6

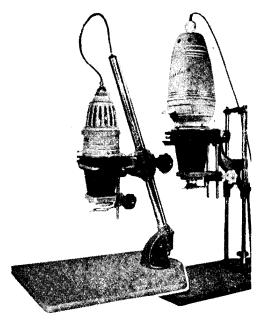
Amateur-type precision enlarger for negatives up to  $6\times 6$  cm in size, BELAR lens f/4.5, F=75 mm, double-condenser 98 mm in dia.

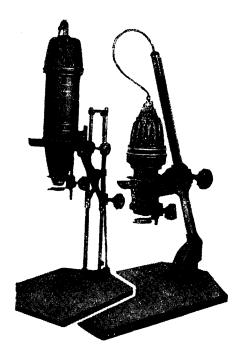
## **33/036** Opemus II 6×6

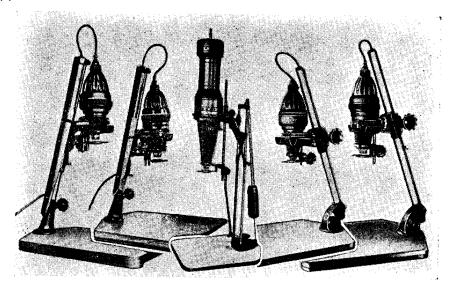
Semi-automatic precision enlarger with slit-focusing, for both black-and-white and colour photography, for negatives up to  $6\times 6$  cm in size, BELAR lens f/4.5, F = 75 mm, with snap-in iris diaphragm, slit-system metal easel and two glasses.

#### 33/037 Magnifax 6,5×9

Precision enlarger for both amateurs and professionals for negatives up to  $6.5\times9$  cm in size, BELAR lens f/4.5, F=105 mm, double-condenser 120 mm in dia.







#### 33/038 Magnifax II 6×9

Semi-automatic precision enlarger with slit-focusing, for both black-and-white and colour photography, for negatives up to  $6\times9$  cm in size; BELAR lens f/4.5, F=105 mm, with snap-in iris diaphragm, slit-system metal easel, adjustable film guide pins, sliding-type masks and two glasses. KOVO

# **33/039 Magnitarus 10×15**

Precision enlarger for use in scientific institutes and laboratories, for enlarging from negatives up to  $10\!\times\!15$  cm in size, BELAR lens f/4.5, F = 180 mm, double-condenser 200 in dia. KOVO

## **33/040 Magnitarus 13**×18

Precision enlarger for use in scientific institutes and laboratories, for enlarging from negatives up to  $13{\times}18$  cm in size, BELAR lens f/4.5, F = 210 mm, double-condenser 240 mm in dia.

KOVO

#### Hercules 18×24

Precision enlarger for use in research institutes and laboratories, for negatives up to  $18\times24$  cm in size, BELAR lens f/4.5, F = 300 mm, condenser 320 mm in dia.

#### 33/041 Axomat 24×36

Semi automatic precision enlarger for both black-and-white and colour photography, for negatives up to  $24\times36$  mm in size (Leica-size), or for those made on 16 mm film; BELAR lens f/4.5, F = 50 mm, with snap-in diaphgram, easel with slit-focusing equipment and negative number checking window.

#### KOVO

#### 33/042 Micromax

Semi-automatic precision enlarger with slit-focusing, of the same design as the Axomat, suitable for enlarging from negatives  $11\times14$  mm on 16 mm film, i. e. from negatives made with the Microma camera; MIRAR lens, f/3.5, F = 35 mm.

#### 33/043 Meocolor Adapters

Adapters for precision enlargers enabling colour enlargements to be made; serve for inserting of compensating colour filters with a heat-protecting filter. KOVO

#### 33/044Compensating Colour Filters $75 \times 75$ mm - $135 \times 135$ mm

a set of 33 filters used for colour photography; for enlarging by means of the Meocolor Adapter. KOVO

### 33/045 Equalizing Filters $75\times75$ mm $135\times135$ mm

Supplement to the compensating colour filters for finding a suitable combination of compensating colour filters while enlarging; a set consisting of 3 filters.

KOVO

#### 33/046 Reproducing Bracket

Accessories to precision enlargers; in combination with a photo camera serves as a reproducing apparatus, i. e. suitable for reproducing from patterns.

KOVO

### 33/047 Masking Equipment $18\times24$ cm

Accessories to precision enlargers, for masking the borders of enlarged pictures and for holding the photographic paper up to  $18 \times 24$  cm in size.

#### Masking Equipment 30×40 cm

Accessories to precision enlargers for masking the borders of enlarged pictures and for holding the photographic paper up to  $18 \times 24$  cm in size.

#### 33/048 Focusing Equipment

for precision enlargers; for easy focusing of the image to be enlarged.

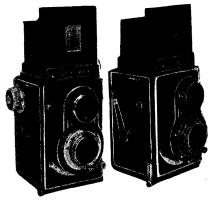
KOVO

#### 33/049 Flexaret II

Simple-type twin-lens precision reflex camera for twelve  $6\times 6$  cm pictures on  $6\times 9$  cm (B2) film, MIRAR taking lens f/4.5, F=80 mm, special anastigmat viewing lens f/3, F=80 mm, METAX central shutter, adjustable to "B" time exposures and snapshots from 1 to 1/400 sec, central-focusing. KOVO

#### 33/050 Flexaret IV

Semi-automatic twin-lens reflex camera for twelve  $6 \times 6$  cm pictures on  $6.5 \times 9$  cm film. BELAR taking lens f/3.5, F = 80 mm, MIRAR viewing lens f/3, F = 80 mm, depth of focus scale on focusing lever, release on camera body, semi-automatic viewfinder, interlocking device preventing double exposures and film advance without exposure.



33/051---052

#### 33/051 Flexaret IVa

Semi-automatic reflex camera for twelve  $6\times 6$  cm pictures on  $6.5\times 9$  cm roll-film, with adapter suitable for use with 35 mm cine film. Rewind knob fitted with indicators of the kind of film used. Outfit similar to that of the Flexaret IV.

#### 33/052 Flexaret V

Full-automatic twin-lens reflex camera for two picture sizes, i. e. for twelve  $6\times 6$  cm pictures on  $6\times 9$  (B2) film, or 36 pictures  $24\times 36$  mm in size on 35 mm cine film. BELAR taking lens f/3.5, F = 80 mm, anastigmat viewing lens f/3, F = 80 mm, PRONTOR SVS central shutter adjustable to "B" time exposures and snapshots from 1 to 1/300 sec, central focusing. KOVO

#### 33/054 Pioneer II

An inexpensive popular-type bakelite camera for beginners, for twelve  $6\times 6$  cm pictures on  $6.5\times 9$  cm roll-film or for sixteen  $4.5\times 6$  cm pictures when used with a  $4.5\times 6$  cm adapter. Six-focus lens. Flash-light connection.



33/055

#### 33/055 Microma II

Full-automatic miniature-size camera for 50 pictures  $11 \times 14$  mm in size on 16 mm film. Segment-shutter, adjustable to "B" time exposures and snapshots from 1/5 to 1/400 sec, film advance combined with simultaneous cocking the shutter by means of a lever, optical type open frame finder, flashlight connection, MIRAR lens f/3.5, F=20 mm.

#### 33/056 Magnola

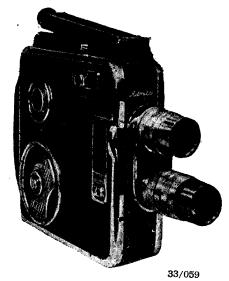
Folding camera designed for accurate, technical, scientific, etc., work, for pictures of architecture, for professional portrait photography, reproductions on dry plates or flat films up to a size of  $13\times18$  cm.

#### 33/057 Enlarger Lenses

BELAR, four-glass, three-element asymmetric semi-balsamed anastigmats in mounts with standard type or snap-in iris diaphragms.

#### **33/058** Admira 8 E

Amateur-type motion picture camera for  $2\times8$  mm film; MIRAR lens f/2.8, F = 12.5 mm, open frame finder with parallax compensation, frequency controller from 10 to 64 frames per second; with acoustic scene length checking, spring-type drive, release enabling normal filming and single-shots.



#### 33/059 Admira 8 II

Design and appearance corresponding to that of the Admira 8 E, however, with a two-lens turret; standard type MIRAR lens f/2.8, F=12.5 mm, TELE-MIRAR lens f/3.5, F=35 mm.

### Filters to the Admira 18 mm and 22 mm in dia

for correct transfer of colours to the grey shades scale. KOVO

#### 33/060

#### Trigger-type Holder

to Admira cameras; enables the camera to be held firmly, makes filming easier and enhances the readiness-foraction of the camera. KOVO

#### 33/061

#### Macro-Equipment 8 II

additional accessories to the Admira 8 II Motion Picture Camera for filming tiny objects and small-size titles; indicates the correct distance from the pattern and proper cutout of the shot.

#### Macro-Equipment 8 E

Similar accessories designed to the same purpose as the foregoing, however, intended for the Admira 8 E Motion Picture Camera.

#### **33/062** Admira 16 A

A new motion picture camera for 16 mm film; for 30 mm film-rolls in day-light packing; battery-drive; one lens.

#### 33/063 MEO 8 Projector

for home projection; simple and lightweight construction, case-type, 200—300 W projection bulb, POLAR projection lens, f/1.5, F  $\equiv \bar{18}$  mm, for reels taking up to 120 m of film, voltage: 110 V and 220 V. KOVO

#### 33/064

#### Editing Table 8 mm and 16 mm

case-type, for examining, rewinding and splicing of 8 mm or 16 mm film; fitted with film length counter and acoustic scene length checking. KOVO

#### 33/066

#### Set of filters for the Microma

A leather case comprising a complete set of compensating colour filters for the Microma camera (G 1, G 2, G 3, GGR 1, GR 1, R 1, B 1, UV). KOVO

#### 33/068

## Reproducing Equipment for the Opemus II

Slit-focusing system easel with space for inserting a  $6.5\times9$  cm magazine for reproducing of  $6\times6$  cm pictures by

means of the Opemus II Enlarger on dry plates  $6.5\times9$  cm or flat films  $6\times9$  cm.

#### 33/069

#### Set-up Shutter

Segment-type two-laminae central shutter, to be attached to lens mounts up to 38 mm in dia, with "B"and "T" time exposures; wire-release. KOVO

#### 33/070

Short-type Tripod Reducing Sleeve

Reducing sleeve with thread for attaching the OPEMUS II enlargers to the photographic tripod while enlarging.

KOVO

#### 33/071

#### **Meopar Objectives**

five-lens three-element anastigmats. Also available for f/4.5 and focal distances of 180, 210 and 300 mm.

#### 33/072

#### Slide Projector 11×14 mm

Small-size slide projector suitable for projecting of slides from pictures made with the Microma camera, adjusted to a size of  $3\times3$  cm; 50 W bulb, 110 V.

#### 33/073

#### Push-button Release

for wire release of the Flexaret IV and IVa reflex cameras; to be attached to the threaded nipple. KOVO

#### 33/074

#### Base-board with Drawer

Polished-wood base-board 400×575 mm in size to the Opemus and Magnifax enlargers, with drawer for keeping sensitive paper or petty accessories. Dimensions: 318×426 mm. KOVO

#### 33/075

#### Reproducing Equipment for Magnifax II

Slit-focusing system easel with space for inserting a  $6.5\times9$  cm magazine, for making reproductions and pictures by means of the Magnifax II Enlarger. The equipment incorporates also an easel with a nut for measuring, outlining and checking of the picture.KOVO

#### 33/076

#### Masking Equipment for Exposure Tests

Sliding equipment with a longitudinal cutout for exposure tests for both black-and-white and colour enlarging and for determining the suitable kind of filter for colour enlarging. KOVO

#### Macro-Adapter for Magnifax II

A short and a longer tube for extending the range of lens extension, for reproducing and making enlargements from tiny objects by means of the Magnifax II Enlarger. KOVO

#### Macro-Adapter for Opemus II

Accessories to the Opemus II Enlarger designed for making macro-pictures of tiny objects by means of the reproducing method. KOVO

#### 33/078

#### **Opemus Illuminator**

A holder with two lamps connected by flexible tubes, to be attached to the stand with oblique-rod enlargers for illuminating of patterns and objects while reproducing and while making macro-pictures of tiny objects by means of the enlarger. KOVŎ

#### 33/079

#### **Magnifax Illuminator**

A holder with two lamps connected by flexible tubes, to be attached to the rod stand, for illuminating of patterns and objects while reproducing and making macro-pictures of tiny objects by means of the Magnifax Enlarger.

#### 33/080

#### Reproducing Equipment for the Microma

Simple device for reproducing by means of the Microma camera; indicates the correct object distance and proper cutout of the shot.

#### 33/081

#### Anamorphot

Auxiliary prism-system for wide-angle projection of 35-mm film with invariable anamorphosis.

#### 33/085

#### Type 120 Rewinder

for quick rewinding of 8-mm and 16-mm films, with folding brackets for reels taking up to 120 m of film.

KOVO

#### 33/086

#### Condensers

two-glass condensers in mounts of various diameters.

#### 33/087

#### **Condenser Inserts**

for inserting of smaller-size condensers into large size enlargers.

#### 33/092

#### Cine projection lenses

POLAR, POLAR-SPECIAL and STIGMAR projection lenses to enlargers for use with 8-mm, 16-mm and 35-mm film, of various speeds and focal lengths.

KOVO

#### 33/094 Rewinders

for rewinding of 8-mm or 16-mm film.

#### 33/095

#### "Trimat" Splicer

for splicing of three film dimensions, i. e. 8-mm, 9.5-mm and 16-mm; made from non-corrosive material.

## **33/096-097** Binoculars

for look-out, tourist and hunting purposes; suitable also for military use, for observing at sea, etc. KOVO

#### 33/098 Universal Abbé Refractometer

for chemical analyses; consists of a telescope and a pair of compensating prisms.

#### Manual Refractometer I, II, III

for determining the percentage of sugar content in solutions, particularly for use in sugar industry (for determining the sugar content of sugar-beet). Suitable for use in fruit-tree culture when used with certain necessary supplements.

#### Immersion-type Refractometer

An instrument for measuring the refractive index of liquids in breweries and similar industrial works where it used as a substitute for lengthy chemical analysis. Measuring range from nd=1.32656 to nd=1.37133. KOVO

#### 33/099 Auxiliary Lenses

to be slipped-over the lens in case shots within a distance smaller than 1 m are to be made. KOVO

#### 33/100 DRUEX Photographic Camera

A bakelit camera, size  $6\times 6$  cm with a Druo all-metal shutter, exposure times 1/25, 1/50, 1/100, B with a three lens anastigmat of the DRUOPTAR type, lens speed F=1:6,3, f=75 mm.

#### **33/101 VEGA III**

All-metal photographic film camera for 35 mm films, size  $24\times36$  with Druoptar 3,5 objective, f=50 mm, Chrontax shutter, 1/10, 1/25, 1/50, 1/100, 1/200, T, B.

#### 33/102 Bakelite Photographic Camera

for 12 snapshots, size  $6\times 6$ , with an achromatic objective 1:8,  $f=75,\,1/50,\,1/100,\,$  diaphragm 8, 11, 16, 22.



33/103

#### **33/103** Children Slide Projector

DIOS batteries used, for slide films  $24 \times 36$  and  $24 \times 18$ .

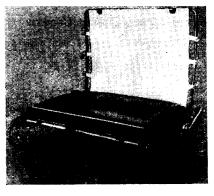
## **33/104**All-metal Slide Projector

## **33/105**Double-sided Photographic Print Drier

type 2430 for amateurs. It is provided with two polishing sheets and a lead-in cable. Input 220 W.

33/101





33/106

# **33/106**Double-sided Photographic Print Drier

Type 660 for polishing and drying of photographs. Input 600 W.

#### 33/107 EXPONET B 3 Exposure Clock

for determining of exposure time; when setting the switching button for the period from 3/10 to 6 seconds or for the period from 6 to 60 seconds.

#### 33/108 Panoramatic Head

to be attached to a photo or cine tripod fitted with conventional threads 1/4" and 3/8", for panning the pictures.

KOVO

#### Interchangeable Eyepieces

Accessories for Admira users with defective sight; available up to plus or minus 3 diopters.

KOVO

#### 33/110

#### Securing Release

for the Admira for making single or continuous shots.

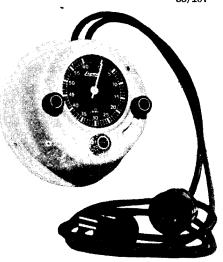
#### 33/111

#### **Exposimeters**

An instrument for measuring the exposure time for both black-and-white and colour film; supplied with a case.

KOVO

33/107



### CZECHOSLOVAK ECONOMIC BULLETIN

informs commercial circles and persons interested in this line on the trade relations of the Czechoslovak Republic with all countries of the world and its building up. Published monthly by the Chamber of Commerce of Czechoslovakia.

#### 34 SPORTING AND HUNTING ARMS

#### **34/001** Slavia 603

calibre 4.5 mm for target practice and sport shooting at a range of 15 metres. Designed for Diabolo ammunition. - Weight 2.6 kg, length 1025 mm.

OMNIPOL

#### **34/002** Slavia 608

calibre 4.5 mm for youths up to the age of 10 years for target practice and sport shooting. Weight 0.85 kg, length 780 mm. PRAGOEXPORT

#### **34/003** Slavia 612

calibre 4.5 mm for target practice and sport shooting for youths up to the age of 10 years at a range of 8 metres. Weight 1.2 kg, length 830 mm.

PRAGOEXPORT

#### 34/004 Slavia 615

calibre 4.5 mm for target practice and sport shooting for youths from 10—12 years of age at a range of 10 metres. Weight 1.5 kg, length 880 mm.

PRAGOEXPORT

#### 34/005 Slavia 618

calibre 4.5 mm for target practice and sport shooting for youths from 12—15 years of age at a range of 12 metres. Weight 1.55 kg, length 860 mm.

PRAGOEXPORT

#### 34/006 ZV3

calibre 4.5 mm for target practice and sport shooting at a range of 10 metres. Weight 1.80 kg, length 949 mm, number of grooves 12. OMNIPOL

#### 34/007 ZV4

calibre 4.5 mm for target practice and sport shooting at a range of 10 metres. Weight 2.55 kg, length 1055 mm, number of grooves 12.

OMNIPOL

#### 34/009 Sport Halfstock Model 47

for target practice and sport shooting with pellets of 4.45 mm in diameter at a range of 25 metres. Weight 3.45 kg, length 1080 mm.

OMNIPOL



34/010

#### 34/010 ZVP Air Pistol

calibre 4.5 mm for target practice and sport shooting, particularly indoors, with Diabolo ammunition. OMNIPOL

#### 34/011

#### Air Rifle with a 30 Shot Magazine

single shot, break-type barrel, for target practice of adults, suitable for shooting of small vermin with 4.5 mm Diabolo ammunition.

OMNIPOL

#### 34/012 Slavia 070 Alarm Starting Pistol

six shot, used for starting, for training of hunting dogs and watch dogs, for stage shooting and for psychological self-defence. It is designed for 6 mm Start cartridges. Weight 0.27 kg, length 100 mm.

#### **Automatic Pistols**

## **34/013** ČZ 7.65, Model 50

with a magazine for 8 rounds. Weight 670 g, overall length 155 mm, length of the barrel 99 mm. OMNIPOL



34/012

#### **34/014** ČZ 6.35

with a magazine for 8 rounds of 6.35 calibre for self-defence. It has the advantages of the revolver as well as of the pistol. Weight 430 g, length 128 mm.

OMNIPOL

#### 34/015 DUO 6,35

is an up-to-date automatic weapon with a magazine for six rounds for self-defence. Manufactured in two colours: black and nickel plated. Weight 370 g, length 114 mm. OMNIPOL

## **34/016 ŻKP** 504 Target Pistol

calibre 4 mm, single shot, break type for indoor shooting. Weight 780 g, length 270 mm. OMNIPOL

#### 34/017 ZKP 541 Universal Automatic Pistol

This pistol by exchanging of a few parts can be assembled either as a sport, target or a rapid fire pistol. Each type can be assembled to take a cartridge . 22 long rifle, or five . 22 short cartridges.

OMNIPOL

# **54/018**Sport Smallbore Pistol . 22 Long Rifle

OMNIPOL



34/015

#### 34/019 Sport Smallbore Pistol . 22 Short OMNIPOL

#### **34/020** ZKR 551 Revolver

a six shot revolver, calibre 9 mm (38 SW) designed for accurate target shooting. Weight 1 kg, barrel length 152 mm. OMNIPOL

#### **Smallbore Rifles**

#### 34/022 ZKM 452 (Brno 2)

for sport and hunting (shooting of vermin). Magazine for 5 rounds . 22 long rifle, on request a 10 round magazine can be supplied. Weight 3 kg, barrel length 630 mm. OMNIPOL

## **34/023** ZKM 456 (Brno 4)

for .22 long rifle exclusively, is designed for contest and target practice shooting and equipped with telescopic sights. Weight 4.5 kg, overall length 1150 mm, barrel length 700 mm, sight length with the telescopic sight 825 mm.

OMNIPOL

#### **34/024** ZKM 468

single shot, for hunting only, calibre 5.6 mm long rifle or 9 mm. Weight 2.10 kg, length 935 mm. OMNIPOL

#### 34/025

#### ZKM 561 Automatic Smallbore Rifle

a hunting gun with dynamic action, taking . 22 long rifle cartridges. Box magazine for eight rounds. Weight 2.80 kg. OMNIPOL

#### 34/026

#### ZKM 457 Smallbore Target Rifle

specially adjusted for contest shooting. It is designed according to international contest shooting regulations. Weight 6 kg.

OMNIPOL

### 34/027-030 Double Barrelled Shotgun

Light, simple hunting gun with a reliable breech and a durable, trouble free firing mechanism for shooting small game with shot filled cartridges. Weight: Bore 16 2.80 kg, Bore 12 3.10 kg.

Supplied in the following types:

ZP 45 bore 16 with extractor

ZP 50 bore 16 with ejector

ZP 47 bore 12 with extractor

ZP 49 bore 12 with ejector

OMNIPOL

#### 34/031

#### Over and Under Shotgun Bore 12

for hunting and sport shooting, a simple design of mutually independent barrels with the possibility of choke

bore exchange, fitting of muzzle brake or a compensator.

OMNIPOL

# **34/032 ZH** 101 Over and Under Shotgun Bore 12

hunting and sport shotgun with two barrels placed over each other; both barrels have an exchangeable choke bore. Trigger mechanism has either one or two triggers. It is designed for hunting, battery or skeet shooting.

OMNIPOL

#### **54/033** ZKW 465 HORNET Smallbore Rifle

of great efficiency for hunting, particularly suitable for shooting of medium sized vermin with  $5.6\times36$  R cartridges, 5 round magazine. Weight 2.85 kg, length 1040 mm. OMNIPOL

#### 34/034 BRNO 21 Smallbore Rifle

designed exclusively for hunting, half stock, five round magazine. Produced in the following calibers:  $6.5\times57$ ,  $7\times57$ ,  $7\times64$ ,  $8\times57$  S,  $8\times60$  S. Weight 3.10 kg, length 1065 mm. *OMNIPOL* 

#### **BRNO 22 Rifle**

full stock, designed for hunting, otherwise the same execution as BRNO 21 rifle. Weight 3.27 kg, length 1065 mm.

OMNIPOL

#### 34/035 ZG 47 Rifle

The receiver of the breech is provided with rails for mounting of OP  $\times$  4 or Lesar 3  $\times$  telescopic sight. This rifle is expecially suitable for shooting of big and tropical game. It is produced in the following calibers:  $7\times57$ ,  $7\times64$ , .270 W 30—06 (7.62  $\times$  63),  $8\times57$  S,  $8\times60$  S,  $8\times64$  S,  $93\times62$ ,  $5.6\times61$  von Hoffe. Weight 3.40 kg.

Are you interested in Czechoslovak products?

### CZECHOSLOVAK FOREIGN TRADE,

a periodical of the Chamber of Commerce of Czechoslovakia, regularly contains reports on traditional export articles as well as novelties of the Czechoslovak industrial production.

#### 34/036

#### ZG 47 - light model

for cartridges of medium calibers:  $6.5\times57$ ,  $7\times57$ ,  $7\times64$ ,  $8\times57$  S, .270 W, 30-06. *OMNIPOL* 



34/039

# **34/037 ZG 47 T Olympia Champion Target Rifle**

A heavy large caliber rifle for international shooting contests — range 300 m. The weight is adjustable in the range from 8—9 kg. OMNIPOL

# **54/038 JAT 54-I Universal Slaughtering Apparatus**

 $\begin{array}{lll} \mbox{for safe and reliable stunning of} \\ \mbox{slaughtering animals.} & OMNIPOL \end{array}$ 

## **34/039**Cattle Slaughtering Apparatus

for killing of slaughtering animals.  ${\it OMNIPOL}$ 

#### 34/040 ZVK Clay Pigeon Trap

for skeet and battery contest shooting. Minimal range of the clay discs is 55 m.

OMNIPOL

#### 35 MECHANIZED OFFICE

#### 35/001 CONSUL 1501-D Typewriter

Length of carriage: 18" (46 cm.). Standard PICA 1 or small ELITE types. Standard column or decimal tabulators. Keyboards for all world languages with Roman, Russian or Greek letters.

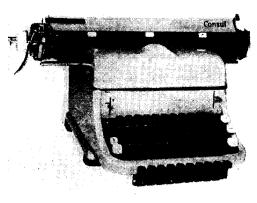
KOVO

#### 35/002 CONSUL 1502-B Typewriter

Length of carriage: 13" (32 cm.). Standard PICA 1 types with column tabulator. Keyboards for all world languages with Roman, Russian or Greek letters.

#### 35/003 CONSUL 1515 Portable Typewriter

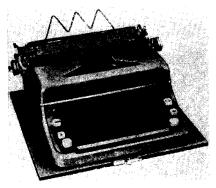
streamlined, with all functions of a standard typewriter. Number of keys: 44. Weight: 9.5 kg. including case. KOVO



35/001

#### 35/004 CONSUL 1517 Typewriter

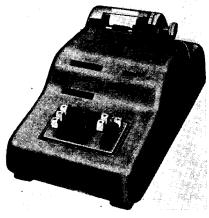
A simplified model of the portable typewriter, without tabulator and with one-colour ribbon and margin stops. Number of keys: 42. KOVO



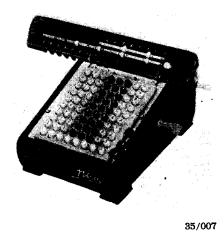


35/003









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# **35/005**CONSUL 1521 Electric Adding Machine

The keyboard contains mine keys. Direct subtraction. Minus totals are recorded in red. The check register enables to follow the calculating process. It checks the set figure before it is transmitted into the counter and recorded on the paper tape. Speed: 132 strokes per min.

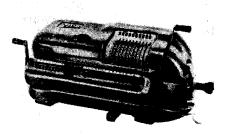
#### 35/006 NISA "P" Calculating Machine

This hand lever (drum type) calculating machine has a capacity of  $10\times8\times16$  with decimal places carried over in the proof register. KOVO

#### 35/007 NISA "K" Calculating Machine

is a full column hand-calculator with a capacity of  $8\times8\times16$ . KOVO

35/006



#### 35/008 NISA "EK" Calculating Machine

is an electrically operated full column keyboard calculating machine with a keyboard capacity of  $8\times8\times16$ . KOVO

#### NISA "EK 1" Calculating Machine

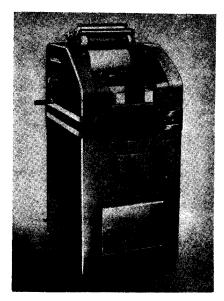
Electrically operated full column keyboard calcuting machine with a keyboard capacity of  $8\times8\times16$ .

#### NISA "K 1" Calculating Machine

Hand operated full column keyboard calculating machine with a keyboard of  $8\times8\times16$ .

#### NISA "C"

hand operated device for simple calculations.

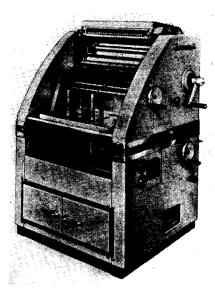


35/012

## **35/012**ROMINOR Offset Printing Machine

This offset printing machine operates on the principle of separation of water from grease. It is also suitable for multicolour prints. The positive image is transmitted from a metal sheet.

KOVO



35/013

#### 35/013 ROMAYOR Offset Printing Machine

This electric offset printing machine operates on the principle of separation of water from grease. It is also suitable for multicolour prints. The positive image is transmitted from a metal sheet.

KOVO

#### 35/014 S-01 Phototype Machine

For multiplication of technical documentation such as drawings, plans, etc. made on tissue paper. Lighting set: Two arc lamps of 2 kW. Motor output 250 W.

## 35/023 MAGNETOFON Dictaphone

## 35/024 Reproduction and other machines

Phototypic process machine with 2 carbon filament lamps, ammonia developer, OPTIREX epidiascope, REF recorder, REPROSCOP reader, OP 5×5 diaprojector.

#### 35/025 Office Machine Accessories

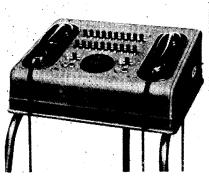
for typewriters, duplicating, printing and line drawing machines, dictaphones, statistical-counting and reproduction machines, etc.

#### 35/026 Administrative Work Equipment

Horizontal, vertical, sorting and rotary filing cabinets, planning requisites, indexing equipment, horizontal letterfiles, copying boards, office furniture.

#### 35/027 Accessories of Administrative Work Equipment

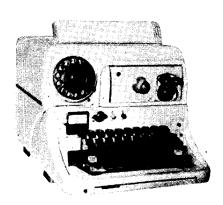
#### 35/028 Punching Clocks



35/029

35/029
Dispatching Equipment

## 35/030 Office and Technical Requisites



35/031

#### 35/031 Dalibor Teleprinter

enables the passing of news recorded on a tape according to new electric principles. The machine permits to receive or transmit by simple current. By means of a change-over switch it can be adapted to transmit or receive by double current, no auxiliary attachment being necessary. Weight: 22 kg. Dimensions: 316×437×230 mm.

#### **Automatic Tape Transmitter**

This special device ensures a smooth and uniform movement of the punched tape and a transmission speed of 100 Bauds. Size:  $120 \times 190 \times 180$  mm.

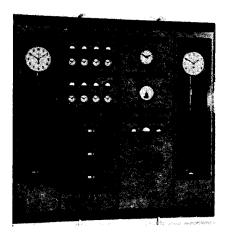
KOVO

From the periodical

#### CZECHOSLOVAK FOREIGN TRADE

you can learn about the products you have not seen at the exhibitions. The periodical appears three-times a year in six languages and contains information on the export products of all branches of the Czechoslovak industry.

#### 36 ELECTRICAL CLOCKS



#### 36/001

#### 36/001 Large Automatic Clock and Signalling Station VUS-160

for use in large and extensive industrial plants and public clock systems. Up to 1100 other clocks can be connected to this station, which can readily be extended to receive multiples of that number of clocks. Maximum daily deviation  $\pm$  12 seconds. Working voltage 24 or 60 V. KOVO

#### 36/002 Automatic Clock and Signalling Station MUS 40

is controlled by Master-Signalling-Clocks HSH-3 with a  $^{3}/_{4}$  second pendulum. It contains various measuring instruments and a fault-signalling equipment. It is suitable for controlling 280 other clocks. Maximum daily deviation  $\pm$  0.6 seconds. Working voltage 24 or 60 V.  $\it KOVO$ 

## **36/003 Master Signalling Clock HSH-3**

suitable for controlling about 50 other clocks. Maximum daily deviation  $\pm$  0,6 seconds. Working voltage 6, 12, 24 V. KOVO

#### 36/004 Master Clock HH-1

with a  $^{3}/_{4}$  second pendulum without a signalling device. Up to 50 other clocks can be connected directly to the contact assemblage. Maximum daily deviation  $\pm$  0,6 seconds. Working voltage 6, 12, 24 V. KOVO

#### 36/005 Signalling Clock SH-1

intended for acoustic signalisation mainly in schools. Maximum daily deviation  $\pm$  0,6 seconds. Working voltage 6 V.

#### 36/006 Precision Master Clock HH-3

with one-second pendulum made of invar with thermal compensation; intended for offices, industries, research laboratories, radio, etc. Maximum daily deviation ± 0,12 seconds. Working voltage 24 V.

KOVO

#### 36/007 Frequency Meter MF

for measuring the frequency of alternating-currents of 50 c/s in power stations, etc. Input of the F. H. P. motor abt. 5 W. Voltage 120 or 220 V A. C. KOVO

36/008



#### 36/008 Single-face Auxiliary Clock PJ 30

for installation in indoor localities, offices, shops, etc. Working voltage 6, 12, 24 or 60 V. KOVO

#### 36/009 Double-face Auxiliary Clock PD 40

Application and working voltage as under item 36/008.

# **36/010**Double-face Auxiliary Clock PDK 60

for use in yards, streets, platforms of railway stations; mounted sideways to the wall. Working voltage 6, 12, 24 or 60 V.

KOVO

## **36/011 Tower Clock B 2 e**

with an automatic electric winding arrangement; striking full and half-hours. Maximum daily deviation  $\pm$  0,6 seconds.  $\cdot$  KOVO

#### 36/012 Shift Control Clock DK-3

the hands of which are advanced by the passage of polarized current impulses sent out every minute by a master-clock or clock station; this is a reliable device for checking precisely the working hours. Working voltage 6, 12, 24 or 60 V.

#### 36/013 Hockey Measuring Set LH

for measuring the net time of an ice hockey match and for signalling goals on ice hockey play grounds. KOVO

#### 36/014 Volley-Ball Measuring Set BS

for measuring the net time and signalling the last three minutes of the match, as well as for measuring the rest times. KOVO

#### 36/015 Electrical Stop Clock RS-30

for rough measurements of time intervals (up to 30 minutes) in testing stations, shops, laboratories and radio studios. Accuracy of timings 0.3 seconds. Motor input 2,5 V. KOVO

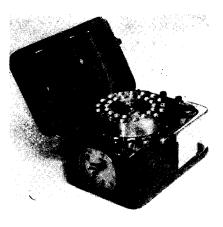
#### 36/016 Electrical Car Clocks AH

for mounting into panels of motor vehicles. They are provided with an anchor movement and electromagnetic battery drive. Visible diameter of the face 2-9/16" (65 mm). Supply voltage of the electromagnet 6, 12, 24 V.

KOVO



36/013 36/018



#### 36/017

Clockworks for Recording Instruments

RPM-93, RPM-171, RP-46, RP-120

provided for continuous recording of the individual measurements. KOVO

36/018 Pigeon Clock RHP for recording the times of arrival of messenger pigeons. KOVO

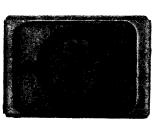
#### 36/019

Tower Clock Gear

Improved operation; precision selfcompensating pendulum. Guarantee of correct operation.

#### 37 CLOCKS AND ALARM-CLOKS







#### 37/001 Clocks and Alarm-Clocks

Various kinds of alarm-clocks, such as B-90 type alarm-clocks, miniature type alarm-clocks, style and travelling alarm-clocks, etc.

## **37/051** Clocks

Standard or striking kitchen wallclocks, wall and mantle-piece clocks, striking clocks, etc.

## 37/101 Automobile Clocks for Scooters

37/111 SP 57 Switch for Washers

#### 37/112 Automatic Switch 57

for ROMO automatic washing machines.

# **37/131 Metronom - A Music-Master's Requisite**

**37/141 Toys** 

All kinds of mechanical moving toys.

#### 37/241 RZF and RZK Time Relays

for the protection of power installations.

#### 38 MOTOR CARS

#### **38/001** Škoda 440 Export

Passenger car of lighter type; carrying capacity 350 kg or 770 lbs; fuel consumption 7 to 8 lt./100 km or 40.4 to 35.3 m. I. g.; travelling speed, level road 110 km. p. h. or 68 m. p. h.; four stroke, water cooled petrol engine; swept volume 1089 c. c. or 66.43 cu. in power output 40 HP at 4200 RPM; battery ignition, 12 V. Overall dimensions: length 4065 mm or 13'4"; width 1600 mm or 5'3"; height 1430 mm or 4'8".

#### **38/002** Škoda 440 Chassis

(for passenger car)

MOTOKOV

#### **38/003** Škoda 1201 Ambulance

Powered with a water cooled, four stroke, four cylinder OHV petrol engine; swept volume 1221 c. c. or 74.48 cu. in.; engine front mounted; rear axle drive; fully enclosed, all metal body. Power output 45 HP. Peak speed 100 km or 62.1 m. p. h.

For transport of patients in a special compartment, separated from the driver; front compartment accommodates two persons, driver included; patient compartment with two stretchers and one seat. Overall length 4620 mm, 15 ft 2 in. Overal width 1690 mm, 5 ft. 61/2 in. Overall height 1600 mm, 5 ft. 5 in. Curb weight 1220 kg, 2690 lbs. Permissible 10 ad 330 kg, 727 lbs.

#### 38/004 All Purpose (Station Wagon)

For transport of a maximum of five passengers and light cargos; loading area can be increased by folding down rear seats, thus ensuring accommodation of two passengers including driver and 500 kg or 1100 lbs payload. Overall length 4360 mm, 14 ft. 33/s in. Overall width 1690 mm, 5 ft. 61/2 in. Overall height 1650 mm, 5 ft. 5 in. Curb weight 1120 kg, 2690 lbs. Permissible cargo 650 kg, 1433 lbs.

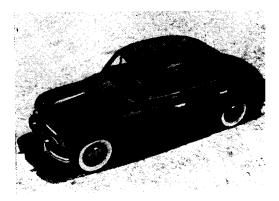
MOTOKOV



38/001

#### 38/005 Delivery Van

For transport of two passengers including driver and 500 kg or 1100 lbs payload in special compartment. Overall length 4360 mm, 14 ft. 3% in. Overall width 1690 mm, 14 ft. 6% in. Overall height 1650 mm, 5 ft. 5 in. Curb weight 1100 kg, 2425 lbs. Permissible cargo 650 kg, 1433 lbs. MOTOKOV



#### **38/006** Škoda 1201 (Sedan)

38/006

Passenger car, four to five seater; fuel consumption 7.5 t, 9 t/100 km or 57.7 to 35.3 m. p. I. g., speed 115 to 120 km. p. h. or 71 to 74.6 m. p. h.; four stroke, water cooled petrol engine; swept volume 1221 c. c. c. or 74.48 cu. in.; power output 45 HP at 4200 RPM; battery ignition, 12 V. Overall dimensions: length 4500 mm or 19'9"; width 1690 mm or 5'6'/2"; height 1520 mm or 5'.

MOTOKOV

#### 38/007

Škoda 450 Roadster-Convertible

A new type of sports car; fuel consumption 8.5 to 9 lt./100 km. or 33.2 to 31.4 m. p. I. g.; speed 130 km. p. h. or 80.8 m. p. h.; four stroke, water cooled petrol engine; swept volume 189 c. c. or 66.43 cu. in.; power output 50 HP at 5200 RPM; battery ignition, 12 V.



38/007

## **38/008 Tatra** 603

Passenger car, six seater; fuel consumption 12—14 lt./100 km. or 23.5 m. p. I. g.; peak speed 160 km. p. h. or 99.4 m. p. h.; four stroke, air cooled, rear mounted petrol engine; swept volume 2545 c. c. or 155.245 cu. in.; power output 100 HP at 5000 RPM; four forward speeds synchro-mesh; tyres  $6.50\times15''$ ; battery ignition, 12 V; curb weight 1478 kg or 3240 lbs. MOTOKOV



38/008

**38/009** Škoda 445

Škoda 440 passenger car powered with engine of 1221 c. c. or 74.48 cu. in.

swept volume; carrying capacity 350 kg or 770 lbs; fuel consumption 8,2 lt./100 km. or 35.7 m. p. I. g. peak speed, level road: 115 km p. h. or 71.2 m. p. h.; four stroke, water cooled petrol engine; power output 45 HP at 4200 RPM; battery ignition, 12 V. MOTOKOV

## The **ŠKODA** and **TATRA**

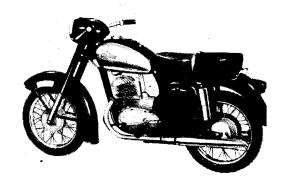
automobiles have numerous advantages on which you will be informed by the CZECHOSLOVAK MOTOR REVIEW, Praha I, ul. 28. října 13.

## 39 MOTORCYCLES, MO-PEDS, SCOOTERS, BICYCLES

# **39/001**Jawa-ČZ 125 c. c. (7.625 cu. in.) Motorcycle

Model 355; two stroke, single cylinder; power output 5.5 HP at 4750 RPM; peak speed 80 km. p. h. or 49.7 m. p. h.; fuel consumption 2 lt./100 km. or 141 m. p. I. g. at a speed of 50 km. or 31.1 m. p. h.; four-speed gearbox; automatic starting and gear shifting by means of a single common lever; swinging rear fork.

MOTOKOV



39/002

39/00**3** 

#### **39/002** Jawa-ČZ 175 c. c. (10.675 cu. in.) Motorcycle

Model 356; two stroke, single cylinder; power output 8 HP at 4750 RPM; peak speed 90 km.p.h. or 55.9 m.p.h.; fuel consumption 2.3 lt./100 km. or 122.6 m. p. I. g. at a speed of 50 km. or 31.1 m. p. h.; four speed gearbox; automatic starting and gear shifting by means of a single common lever; swinging rear fork.

MOTOKOV

#### **39/003** Jawa-ČZ 250 c. c. (15.25 cu. in.) Motorcycle

Model 353/04; two stroke, single cylinder; power output 12 HP at 4750 RPM; peak speed 105 km. p. h. or 65.2 m. p. h.; fuel consumption 3 lt./100 km or 94.2 m. p. I. g. at a speed of 50 km or 31.1 m. p. h.; four speed gearbox; starting and gear shifting by means of single common le-

ver; automatic clutch control; swinging rear fork.

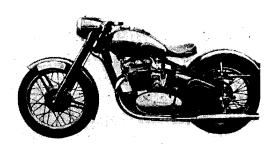
Model 353/04; differs from Model 353/03 by front fork of new design with another solution of hydraulic damping; intake silencer made of polyamide; machine fitted with amply dimensioned exhaust silencers of higher efficiency; Bowden cable casings fitted with adjuster screws on handle bars.

MOTOKOV

#### 39/004

Jawa-ČZ 350 c. c. (21.35 cu. in.) Motorcycle

Model 354/04; two stroke, twin cylinder; power output 16 HP at 4750 RPM; peak speed 120 km. p. h. or 74.6 m. p. h.; fuel consumption 3.25 lt./100 km or 86.76 m. p. I. g. at a speed of 50 km or 31.1 m. p. h.; four speed gearbox; starting and gear shifting by means of a single common lever; automatic clutch control; swinging rear fork.



Model 354/04; differs from Model 354/03 by front fork of new design with another solution of hydraulic suspension damping; intake silencer made of polyamide; machine fitted with amply dimensioned exhaust silencers of higher efficiency; Bowden cables have adjuster screws on hadle bars.

MOTOKOV

# **39/005**Jawa-ČZ 500 c. c. (30.5 cu. in.) Motorcycle

Model 15/02; four stroke OHC engine; power output 28 HP at 5500 RPM; peak speed 140 km. p. h. or 87 m. p. h.; fuel consumption 4 lt./100 km. or 70.6 m. p. I. g. at a speed of 60 km. or 37.3 m. p. h.; four speed gearbox; automatic clutch control; front fork with hydraulic suspension dampers; rear telescopic springing.

MOTOKOV

## **39/006**Sectional Views of Motorcycles in Motion

#### 39/007

ČZ 125 Competition Motorcycle

Model 355, competition design; power
output 6.5 HP at 5100 RPM; peak
speed 85 km. p. h. or 52.8 m. p. h.

MOTOKOV

#### 39/008

**ČZ 175 Competition Motorcycle**Model 356, competition design; power output 10.5 HP at 5250 RPM; peak speed 105 km. p. h. or 65.2 m. p. h. *MOTOKOV* 

#### 39/009

Jawa 250 c. c. (15.25 cu. in.) Competition Motorcycle

Model 553, special design ("Six Days Trial"), power output 14 HP at 4750 RPM; peak speed 120 km. p. h. or 74.6 m. p. h. MOTOKOV

#### 39/010

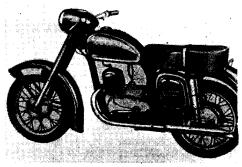
Jawa 350 c. c. (21.35 cu. in.) Competition Motorcycle

Model 554, special design ("Six Days Trial"); power output 18 HP at 5000 RPM; peak speed 130 km.p.h. or 80.8 m.p.h. MOTOKOV

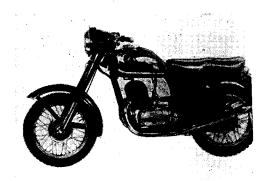
#### 39/011

ČZ 125 Race Motorcycle

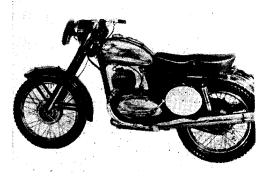
MOTOKOV



39/001



89/008



39/010

39/012 ČZ 250 Race Motorcycle

MOTOKOV

**39/013**Jawa 350 Race Motorcycle

MOTOKOV

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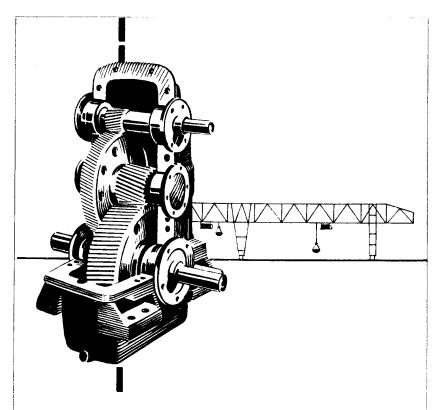
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## MASCHINIEN -EXPORT

B E R L ! N W 8 - M O H R E N S T R A S S E 6 1

#### 39/014

Jawa 500 Race Motorcycle

MOTOKOV

#### 39/015

Jawa-ČZ 250 c. c. (15.25 cu. in.) Motorcycle

MOTOKOV

#### 39/016

Jawa-ČZ 350 c. c. (21.35 cu. in.) Motorcycle

MOTOKOV

#### 39/017

#### VELOREX Sidecar Model 560 for Jawa-ČZ 250 and Jawa-ČZ 350 Motorcycles

Frame of square section steel beams; wheel sprung and fitted with full-hub brake controlled simultaneously with motorcycle foot brake. Tyre 3.25—16". Body and mudguard of POLYTEX plastic.

#### 39/018

#### VELOREX Sidecar Model 561 for Jawa-ČZ 500 Motorcycle

Frame of square section steel tubes; wheel sprung and fitted with full-hub brake operated simultaneosly with motorcycle foot brake. Tyre size 3.25—19". Body and wing of POLYTEX plastic.

#### **39/019** ČZ 175 c. c. (10.675 cu. in.) Scooter

Model 501; two stroke, single cylinder; power output 8 HP at 4750 RPM; peak speed 80 km. p h. or 49.7 m. p. h.; fuel consumption 2 lt./100 km. or 141 m. p. I. g. at a speed of 50 km or 31.1 m. p. h.; welded body of sheet steel; wheels interchangeable; tyres 12"×3.25"; curb weight of machine 132 kg or 291 lbs.

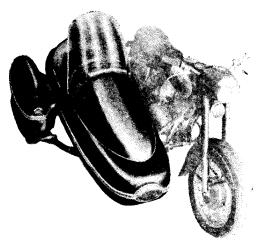
MOTOKOV

#### 39/020

#### Jawa 50 c. c. (3.05 cu. in.) Mo-Ped

Model 551; two stroke, single cylinder; power output 1.6 HP at 5000 RPM; two speeds; gear change control mounted on hadle bars; peak speed 45 km. p. h. or 28 km. p. h.; fuel consumption 1.6 lt./ 100 km or 177 m. p. I. g. at a speed of 20 km. or 12.4 m. p. h.; both front and rear wheel sprung by means of swinging fork.

MOTOKOV



39/017



39/019

39/020



#### 39/021 Tube-Type Mo-Ped S2

Type 552 Jawa c. c. or 3.05 cu. in. motorcycle with diagonal cylinder and pedals led out from cylinder block; front wheel sprung by means of swinging arm; both wheels have full-hub brakes.

MOTOKOV

#### **39/022** PIONÝR-JAWA 50

Model 555: Jawa 50 engine; firm rear wing connected to cowl; central drums and speedometer.

MOTOKOV

#### 29/023 ESO 350 MC and ESO 500 MC Cross Country Motorcycles

For cross-country races. Exeptional stress and strain as well as high requirements regarding manoeuvrability and stability called for special development of frame.

MOTOKOV

#### 39/024 ESO DT 3 Dirt Track Motorcycle 1

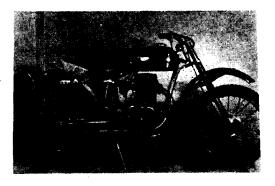
Motorcycle frame of tubular construction; steering head reinforced; engine and two-speed gearbox mounted in chassis of sheet dural. Stroke 82 mm or 3.23", bore 88 mm or 3.46"; swept volume 498.56 c.c. or 40.41 cu. in. Fuel: methylalcohol; power output: 48.6 HP; speed: 7500 RPM.

MOTOKOV



39/022

89/024



## The JAWA-ČZ

motor-cycles participate in important contests and trials. Extensive reports on these events are to be found in the illustrated periodical CZECHOSLOVAK MOTOR REVIEW, Praha I, ul. 28. října 13.

#### 40 MOTOR BUSES

#### **40/001** Škoda 706 RTO Bus

New model of motor bus powered with four stroke, water cooled, six cylinder diesel engine; swept volume 11,781 c. c. or 718.64 cu. in.; direct fuel injection; power output 170 HP at/1900 RPM; fuel consumption 24 lt./100 km or 11.8 m. p. I. g.; permissible load 5800 kg or 12,786 lbs. Overall dimensions: length 10,840 mm or 35'7"; width 2500 mm or 8'22/3"; height 2980 mm or 9'9".

#### 40/002

#### Škoda 706 RTO De Luxe Motor Coach

For 35 passengers; all-steel body; comfortable seats; large windows; perfect ventilation and heating. § 706 RTO diesel engine; fuel consumption 24 lt. 100 km or 9.72 m. p. l. g.; peak speed 90 km. p. h. or 55.9 m. p. h.

**MOTOKOV** 

#### **40/003** Škoda 706 RTO Bus, Municipal Model

§ 706 RTO diesel engine; fuel consumption 27 lt. 100 km or 10.1 m. p. I. g.; speed 65 km. p. h. or 40.4 m. p. h.; pneumatic control of entrance and exit doors; 28 seats: 22 standing accommodations.

MOTOKOV

#### 40/004

#### Škoda 706 RTO Motor Coach

Improved chassis model Š 706 RO; semi-structural, welded design; tyres 11.00—20 EHD; speed 86 km. p. h. or 53.43 p. m. h.; designed for 44 passengers.

MOTOKOV

#### **40/005** Škoda 706 RTO Chassis

Improved chassis derived from previous ŠKODA 706 RO model; for technical data see Škoda 706 RTO Bus.

MOTOKOV



40/001



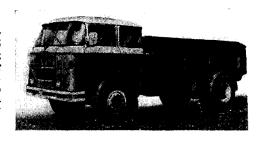
40/002



#### 41 MOTOR TRUCKS

#### 41/001 Škoda 706 RT Truck

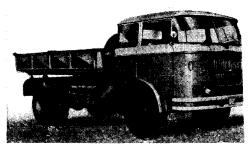
Commercial vehicle with fuel consumption of 25 lt./100 km or 11.3 m. p. I. g.; speed 77 p. h. or 47.85 m. p. h.; Cargo platform  $5000 \times 224\overline{5}$  mm or  $16'7' \times 7'4^2/5''$ ; height of side panels 500 mm or 20''; permissible cargo 8800 kg or 19,360 lbs. Fuel tank capacity 175 lt. or 38.5 l.g. MOTOKOV



#### 41/001

#### **41/002** Škoda 706 RTS Tipper

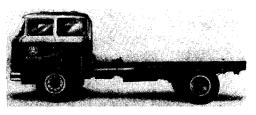
Commercial vehicle powered with a four stroke, water cooled diesel engine with direct fuel injection; swept volume 11,781 c. c. or 718.64 cu. in.; power output 160 HP at 1900  $\overline{\text{RPM}}$ . Fuel consumption 26.5 lt./100 km. or 10.6 m. p. I.g.; peak speed 65 km. p.h. or 40 m.p.h.; Cargo platform 4000  $\times$  2220 or 13'11'2"  $\times$  7'32'5"; side panel height 450 mm or 18"; permissible cargo 7950 kg or 17,512 lbs; fuel tank capacity 175 lt. or 38.5 l.g. MOTOKOV



#### 41/002

#### **41/003** Škoda 706 RT Chassis

Four stroke, water cooled diesel engine with direct fuel injection; swept volume 11,781 c. c. or 718.64 cu. in.; Power output 160 HP at 1900 RPM. Foot operated pressure air brakes for all four wheels; hand operated mechanical brake acting on rear wheels; engine brake. Tyres 11.00—20 EHD; rear tyres dual.



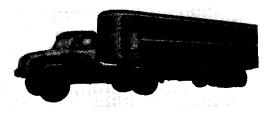
41/003

#### 41/004

#### 41/004 N 1 OCH Refrigerator Trailer for T 137 Tug

Serves for brief emergency transport in tow by tractor or truck. Refrigerator volume  $8725\times1980\times1900$  mm or  $28'8''\times6'6''\times6'2''$ ; permissible cargo 10,000 kg or 22.023 lbs; weight of set 23.300 kg or 51.305 lbs; overall length 13.425 mm or 44'.

MOTOKOV



#### 41/005 Tatra 111 S 2

Motor tipper of 10 metric tons or 22,000 lbs capacity; steel tipper platform tipping either side or rearwards. Short wheelbase enables easy manoeuvring in limited space. Tipper platform operated by means of two telescopic ram cylinders. Weight 9460 kg or 20,855 lbs. Carrying capacity 10,000 kg or 22,046 lbs. Peak speed (at 1800 RPM) 61.5 km. p. h. or 38.2 m. p. h.. Fuel consumption at a speed of 46 km or 28 m. p. h.: 34 lt./100 km. or 8.31 m. p. I. g.

#### 41/006 Tatra 141

High efficiency tractor for transportation of heavy, voluminous cargooes loaded on undercarts, up to 100 metric tons or 220, 460 lbs weight. The cabin is fitted with eight seats and a radio receiver. The tug has a sturdy power winch driven by the vehicle engine and strong coupling devices both front and rear for pulling or pushing heavy trailers. Weight (unloaded) 12.400 kg or 27.336 lbs. Weight (5500 kg or 12.125 lbs cargo and crew included) 18.240 kg or 40.212 lbs. Maximum permissible trailer weight 100.000 kg or 220.460 lbs. Peak speed 37.6 km. p. h. or 23.32 m. p. h. Tatra 111 A-5 engine. Maximum power output 185 HP. MOTOKOV

#### 41/007 Tatra 137

Modern, fast commercial vehicle of 7.2 metric tons or 15,872 lbs carrying capacity; for road and off-road transport of piece cargos; powered by Tatra 928 engine. Weight 5450 kg or 12,015 lbs; carrying capacity 7200 kg or 15,872 lbs. Peak speed 100 km. p. h. or 62.1 m. p. h. Average fuel consumption approximately 22 to 24 lt./ 100 km or 12.8 to 11.8 m. p. I. g. Pull on coupling pin 5800 kg or 12,786 lbs.

#### 41/008 Tatra 137 S 1

Motor tipper with steel tipper platform of 3.5 m³ or 123.6 cu. ft. capacity; tipping rearwards; for heaviest jobs in building plots, quarries, surface mines etc. Weight 6500 kg or 14,330 lbs;



41/005



41/006



41/007



carrying capacity 7000 kg or 15,432 lbs. Peak speed 90 km. p. h. or 55.9 m. p. h. Maximum tipping period 10 seconds. MOTOKOV

#### 41/009

#### Tatra 138 A

Modern three-axle truck of 12 metric tons or 26,455 lbs carrying capacity; powered with Tatra 928 eight cylinder diesel engine. Engine design similar to that of model 137; performance higher. Weight 8000 kg or 17,637 lbs. Carrying capacity 12,000 kg or 26,455 lbs. Peak speed 72 km. p. h. or 44.74 m. p. h. Pull on trailer coupling hook 10,250 kg or 22,597 lbs.

#### **41/010** Tatra 137 NT

Tug (transport tractor) for towing two-wheel trailers for transport, refrigerator, furniture moving, passenger transport, etc. purposes; payload approximately 10 to 15 metric tons or 22,000 to 33,000 lbs. Trailer coupling pin controlled electro-pneumatically from driver's cabin. Weight 5550 kg or 12,235 lbs. Peak speed 90 km. p. h. or 55.9 m. p. h.

#### 41/011 Praga V 3 S

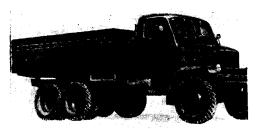
Commercial vehicle for heavy duty service under the most adverse conditions. Carrying capacity: 5000 kg + 5500 kg trailer or 11,023 + 12,125 lbs trailer on roads; 3000 kg + 3100 kg trailer or 6614 + 6834 lbs trailer offroad. Trailer weight can be temporarily increased to 7500 kg or 16,534 lbs. on gradients up to 5% (max. distance 20 km or 12.4 m). Weight 10,650 kg or 23,456 lbs. Three drive axles (front wheel drive controllable); 2×4 forward speeds, 2 reverse. T 912 four stroke, air cooled, six cylinder in-line diesel engine; bore 110 mm or 4.33"; stroke 130 mm or 5.12"; total swept volume 7412 c. c. or 452.132 cu. in. MOTOKOV

#### **41/012** Praga V 3 S Van

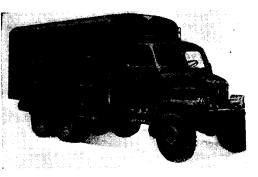
Serves mostly as mobile workshop. Fully enclosed van body. Walls and roof fitted with heat- and noise deadening insulation. Ventilation by means of intake air blower. Heating unit



41/009



41/011



41/012

41/013



mounted on LH rear side. Electrical equipment 12 V; 220/380 V available.

MOTOKOV

#### 41/013

Praga V 3 S Tipper

For heavy duty earth jobs. Metal tipper platform of 2.6 m³ or 91,816 cu. ft. capacity for operation under excavator. Maximum tipping angle 600 rearwards within 8 to 10 seconds combined with automatic control of tailgate ensures the highest efficiency. Carrying capacity 4650 kg or 9589 lbs; weight 10,430 kg or 22,993 lbs. The remaining main data and equipment equal those of V 3 S Truck.

MOTOKOV

#### 41/014

Praga S 5 T

All purpose commercial vehicle. Carrying capacity: 5000 kg + 7500 kg trailer or 11,023 + 16,534 lbs trailer. Weight 9730 kg or 21,450 lbs. T 912 four stroke, air cooled six cylinder inline diesel engine. Bore 110 mm or 4.33"; stroke 130 mm or 5.12"; swept volume 7142 c. c. or 452,132 cu. in. Maximum power output 100 HP/2100 RPM. Fuel consumption 180 gr./HP h or 6.37 oz. HP/h.

#### 41/015

Praga S 5 T Tipper

Tipper platform of resilient construction and 3.25 m³ or 114.77 cu. ft. capacity ensures speedy operation. Carrying capacity 4500 kg or 9920 lbs; Weight 9650 kg or 21,274 lbs. The remaining data equal those of \$ 5 T Truck.

#### 41/016

Praga S 5 T Truck For data see S 5 T.

MOTOKOV

#### 41/017

Praga V 3 S Chassis

Dats equal those of Praga V 3 S Truck For technical service. MOTOKOV



41/014



41/015

#### 41/018 Škoda 706 RTTS Tug

Road type for towing two wheel trailers: furniture van, refrigator van, ambulance, mail van and other purpose trailers. Tug is powered with \$7.06 RTO engine (same as motor coach).

\*\*MOTOKOV\*\*

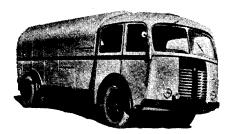
#### 41/019 Škoda 706 RT Truck with RH Steering

MOTOKOV

#### The **ŠKODA** and **TATRA**

automobiles have numerous advantages on which you will be informed by the CZECHOSLOVAK MOTOR REVIEW, Praha I, ul. 28. října 13.

## Approved For Release 2007/08/22 : CIA-RDP80T00246A002500390002-0 42 SPECIAL CARS



42/001

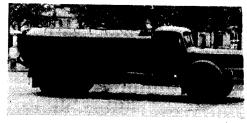
#### **42/001** Š 706 ROK-KUKA Dust Bin Collector

Cabin accommodating 6 persons; automatic control and locking of rear cover by means of pressure air; operated from driver's cabin. Dust bin shaker has o sprung flap ensuring opening of the bin without damage when emptied. Capacity 10 cu. metres of loose refuse.

MOTOKOV

#### 42/002 Š 706 AKVMRT Municipal Sprayer

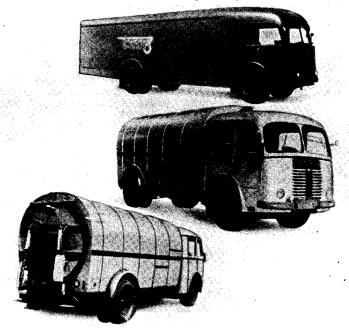
A new model. Technical data indentical to those of ŠKODA 706 RT Truck. MOTOKOV



#### 42/004 V 3 S Liquid Refuse Tanker

Mounted on PRAGA V 3 S chassis, serves for pumping and transport of badly contaminated liquids. The vehicle can also operate in off-road terrain with the cargo reduced. Weight 10,650 kg or 23,480 lbs.

MOTOKOV



## Approved For Release 2007/08/22 : CIA-RDP80T00246A002500390002-0 43 SERVICE VEHICLES

43/001 A 3 Trailer

(3 metric tons or 6600 lbs capacity).

MOTOKOV

43/002 A 5 Trailer

(5 metric tons or 11,000 lbs capacity). MOTOKOV

43/003 Trailer-Tanker

MOTOKOV

43/002

43/004

A 5 Tipper Trailer

(5 metric tons or 11,000 lbs capacity).

MOTOKOV

43/006 DA Trailer

MOTOKOV

43/005

A 10 Trailer

(10 metric tons or 22,000 lbs capacity).

MOTOKOV

43/007 city). DT 7 Trailer

MOTOKOV

#### 44 TRAILERS

44/001

44/002

Service Shop Trailer

for passenger cars and motorcycles. MOTOKOV

MOTOKOV

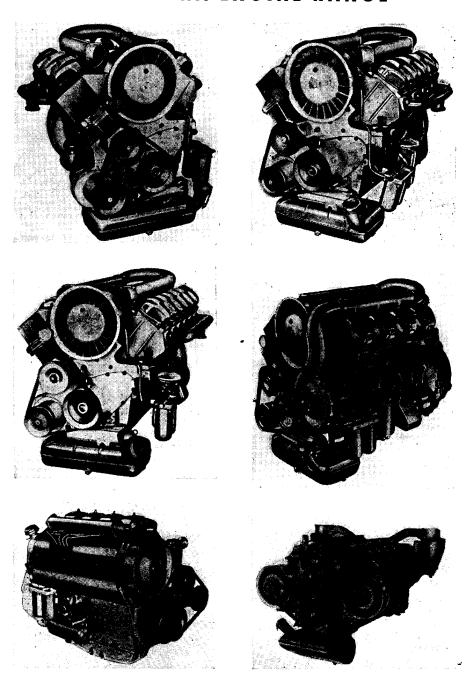
44/003

Service Shop Trailer

Service Shop Trailer for spark plugs.

MOTOKOV

## Approved For Release 2007/08/22 : CIA-RDP80T00246A002500390002-0 45 TATRA ENGINE RANGE



#### 46 MOTOR VEHICLE ATTACHMENTS

#### 46/001 Fuel Injection Equipment

PC fuel injection pumps c/w nozzle holders and nozzles of corresponding size; PV fuel injection pumps with speed governors; nozzle holders c/w nozzles; CD fuel transfer pump; fuel filters; nozzle tester.

MOTOKOV

46/002 NC Test station

MOTOKOV

#### 46/003 Carburettors

Downdraught, horizontal, vertical; fuel transfer pumps; JIKOV MONOBLOK power carburettors. MOTOKOV

# 46/004 Gauging Table for Carburettor Jets

MOTOKOV

#### 46/005 Spark Plugs

Full range of all purpose plugs: heater plugs; spark plugs for racing machines; plugs for power plants; plug production process.

MOTOKOV

#### 46/006 Service Appliance

for testing and adjustment of spark plugs and ignition systems of petrol engines. MOTOKOV

#### 46/007 Brake Systems

Hydraulic and pressure air brakes; pressure air stop light switch; glass fluid reservoirs; master brake air-pressure cylinder and single stage wheel brake cylinder.

MOTOKOV

#### 46/008 Shock Absorbers

For cars, commercial vehicles, motorcycles; tester for shock absorbers; telescopic suspension with hydraulic suspension damper for motorcycles. MOTOKOV

#### 46/009 Horns

Electric and pneumatic.

MOTOKOV

#### 46/010 Independent Bus Heaters

MOTOKOV

#### 46/011 Sundry Accessories

Speedometers for motorcycles, cars and commercial vehicles; steering wheels for cars and commercial vehicles; switch box for motorcycles; ammeters; temperature gauges; starter motors; windscreen wipers with automatic full travel; wiper drives; wiper blades, RH and LH; junction boxes; fuse boxes; cut-out switches; change over switches; buttons; warning lamps; trafficator switches; plugs and sockets; pressure switches; commutators; § 440 dashboard and T 603 dashboard.

MOTOKOV

Ignition distributors; ignition coils; 6V coils for motorcycles; starter motor, 150 mm or 5.91" dia., with retractable armature; starter motor, 125 mm or 4.92" dia., with retractable drive pinion; regulator coils; flywheel magneto; magnetos for single cylinder and twin cylinder engines; starter-dynamo for motocycles and scooters; rheostat; battery cut-out and change-over switch; heater plug switch; starter dynamo for aircraft motors. MOTOKOV Heater unit for Škoda 440; air cleaner for Škoda 440; air cleaner for V3S; T 805; 706; air cleaner for motorcycles (prefilter with intake silencer). MOTO-KOV number plate and tail lamps; dome lamps; built-in headlamps; motor car headlamps; built-in motorcycle headlamps; trafficator lamps; fog lamps; inspection lamps; folding lamps; seat lamps and radiators for motor vehicles. MOTOKOV



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#### 46/012 Accessories

Jerry-cans: 7, 10 and 15 litres or 1.54, 2.2 and 3.3 I. g. MOTOKOV

# **46/014**Various Storage Batteries for Motor Cars, Trucks and MotorCycles

# **46/015**Magnetic Drain Plug (Magnet Filter)

for motor vehicles for draining of crankshaft and differential housing.

#### 46/016 Air Pressure Gauge

for measuring air pressure in tyres. Two types, up to 4 atm. with a short endpiece for passerenger cars and up to 8 atm. with a long end piece for lorries.

# 46/018 Mobile High Pressure Greasing

with a flexible, pressure proof armour hose.

#### 46/018 Mobile Auto Jack

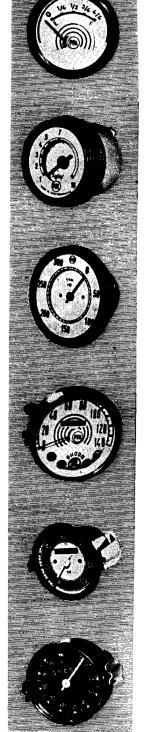
length 1300 mm, lifting capacity 3000 kg, lowest position 145 mm, highest 450 mm.

#### 46/019 Oil Filter

consisting of an insert mounted elastically in a strong cylinder closed with a cover.

# **46/020 Lead Batteries** (Motor car batteries)

(Motor car batteries.) 5 types 6 V and 5 types 12 V.



Approved For Release 2007/08/22: CIA-RDP80T00246A002500390002-0

#### 46/021 Mobile Oil Filling Apparatus

for filling of differential housing and gearboxes. Capacity 20 litres of oil or vaseline for differential housings or gearboxes.

#### 46/022 Motor Car Lights

for mudguards, parking lights, stop lights, traffic, tail lights.

## **46/023**Pull Switch

for switching on of various low voltage appliances for mouting on the motor car dashboards.

#### 46/024

Chisels of all kinds.

#### 46/025

Clock shaped Air Pressure Gauge

with an end rubber hose for motors cars from 3,5 to 8 atm. in an attractive igelite case.

#### 47 BICYCLES

## 47/001 Touring Bicycles (44 Exhibits)

Models: Tp E3; Td E3; Tp 4; Td 4; Tp 5; Td 5; Td 6; Tp 11; Td 11; Tp E9; Td E9; Tp L9.

MOTOKOV

#### 47/002 Sports Bicycles (36 Exhibits)

Models: Sp E6; Sd E7; Sp 8; Sp 18; Sp 16; Sd 17; FS and F 20. MOTOKOV

#### 47/003

Racing and Special Purpose Bicycles (18 Exhibits)

Models: F11; F1; F22; K2; B2; M1; F2 and tandem. MOTOKOV



# 47/004 Baby and Junior Bicycles (48 Exhibits)

Models: Sp E 10; Sd E 10; Tp 12; Td 12; DN 1; PE 2; PE 3; PL 1; PL 2 and latest models: Sp 250; Sp 255; Sd 250.

MOTOKOV

#### 48 BICYCLES SPARE PARTS

48
Spare and Replacement Parts and
Accessories for All Types of
Bicycles

MOTOKOV

221

47/001

#### 49 TRACTORS

#### 49/001 Zetor 25 A

All purpose farm tractor; four stroke, twin cylinder diesel engine. Swept volume 2.08 litres or 126.88 cu. in.; fuel consumption when ploughing approx. 4.5 lt./h or 1 Imp. gall./h. Power output 26 HP at 1800 RPM. Six forward speeds stepped up from 3.7 km. p. h. up to 28.3 km p. h. or from 2.3 m. p. h. up to 17.55 m. p. h.

#### 49/002 Zetor 25 A

All-purpose farm tractor fitted with driver's cabin. MOTOKOV

#### 49/003 Zetor 25 A

Fitted with hydraulic power lift and drawbar for two-wheel trailers.

#### MOTOKOV

#### 49/004 Zetor 25 A

With hydraulic power lift and three point linkage. Hydraulic lift controls mounted ploughs, cultivators, hoes, hillers, etc.

MOTOKOV

#### 49/005 Zetor 25 A

without hydraulic power lift. Fitted with bottom swinging drawbar and air brakes for braking trailers.

### MOTOKOV

#### 49/006 Zetor 25 A

With hydraulic power lift, lifted tierods and unsprung three position drawbar; suitable for two wheeled trailers.

MOTOKOV

#### 49/007 Zetor 25 A

Without hydraulic power lift. Steel wheels, without electrical equipment. Tropical design.

#### 49/008 Zetor 25 A

With hydraulic power lift and hydraulic overload release for engine clutch which is automatically released when the implement encounters a submerged rock. Three position drawbar serves for coupling trailers. MOTOKOV

#### 49/009 Zetor 25 A

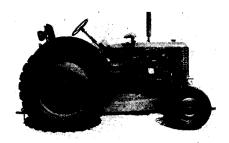
With hydraulic power lift, tyre inflating compressor, hydraulic lock and position drawbar.

MOTOKOV

#### 49/010 Zetor 25 A

Without hydraulic power lift, with cab and air brakes for braking trailers. Top drawbar with sprung coupling yoke for trailers and bottom swinging drawbar.

MOTOKOV



49/011-012

#### 49/011-012 Zetor 25 K

Designed mainly for row crop and cultivation jobs. Four stroke twin cylinder diesel engine; power output 24 HP at 1600 RPM. Swept volume 2.08 litres or 126.88 cu. in. Fuel consumption when ploughing 4 lt./h. or 3.52 Imp. quarts/h. Six forward speeds stepped up from 4.0 up to 18.6 km. p. h. or from 2.49 up to 11.55 m. p. h. Two reverse: 2.7 and 6.3 km. p. h. or 1.68 and 3.89 m. p. h. Electrical equipment: 12 V.

MOTOKOV

.222

#### 49/013 Zetor 25 K

with hydraulic power lift, bottom swinging drawbar and 13.00—28" rear tyres. Hydraulic power lift controls mounted ploughs, cultivators, hoers, hillers, etc.

MOTOKOV

#### 49/014 Zetor 25 K

(standard attachments).

Top drawbar with sprung coupling yoke; bottom drawbar; rear wheel tyres 9.00—36".

MOTOKOV

#### 49/015 Zetor 25 K

Without hydraulic power lift, with upper drawbar, bottom swinging drawbar; rear wheel tyres 9.00—36".

MOTOKOV

#### 49/016 Zetor 25 K

with hydraulic power lift, drawbar for two-wheel trailers and rear wheel tyres 13.00—28". MOTOKOV

#### 49/017 Zetor 25 K

with hydraulic power lift, horizontal exhaust, 3-position drawbar for coupling trailers and  $13.00-28^{\prime\prime}$  rear wheel tyres.

#### 49/018 Zetor-Super

without hydraulic power lift. For technical data see Zetor-Super with hydraulic power lift.

MOTOKOV

#### 49/019 Zetor-Super

with hydraulic power lift. Wheeled tractor frameless design; four cylinder in-line diesel engine with direct fuel injection; swept volume 4160 c. c. or 253.76 cu in. maximum power output 42 HP at 1500 RPM; maximum permanent power output 38 HP at 1300 RPM. Tyres: front 6.00—20", rear 13.00—28".

#### 49/020 Zetor-Super

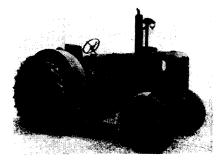
with power winch, protective net and short mudguards. Power winch of single-drum type; single speed, overload release, brake and automatic cable winder.

MOTOKOV

#### 49/021 Zetor-Super

without hydraulic power lift. With pressure air brakes and driver's cabin; suitable for road trasport purposes.

MOTOKOV



49/022

#### 49/022 Zetor-Super

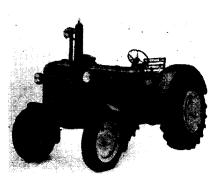
with dual rear wheels for rough land service.

MOTOKOV

#### 49/023 Zetor-Super

With front mudguards without speedometer. MOTOKOV

49/019



#### 49/024 **Zetor-Super**

with additional weights of 800 kg or 800 kg or 1764 lbs; pull on hook increased to 2000 kg or 4400 lbs.

MOTOKOV

#### 49/026 Zetor Super P

Tracklayer tractor of frameless design for any kind of farm, forest and building industry job.



49/025



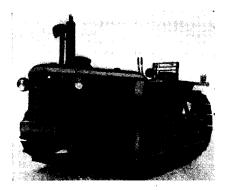
49/027

#### 49/025 Zetor-Super

with power winch and protective net. Single drum power winch has a gearbox with two winding speeds, overload release, brake and automatic cable spooling.

MOTOKOV spooling.

49/028



#### 49/027

Zetor Super P

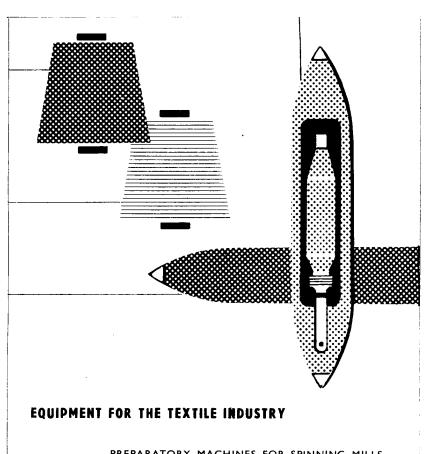
with bulldozer blade. Bulldozer blade is controlled from tractor hydraulic power lift by means of steel cables. Working width of blade 2300 mm or 7'63's"; height 750 mm or 2'51'2"; capacity 1 m³ or 35.31 cu. ft. MOTOKOV

#### 49/028 Zetor Super P

with hydraulic power lift and 400 mm MOTOKOV tracks.

#### 49/029

**Zetor Super Tractor-Sectional View** (Wheeled tractor) MOTOKOV



PREPARATORY MACHINES FOR SPINNING MILLS
SPINNING MACHINES
YARN AND ROPE SPINNING MACHINES
TEXTILE FINISHING MACHINES
MACHINES FOR WEAVING MILLS
KNITTING AND HOSIERY KNITTING MACHINES
INDUSTRIAL SEWING MACHINES
HOUSEHOLD SEWING MACHINES
SHOEMAKING AND LEATHERWORKING MACHINES

DEUTSCHER INNEN-UND AUSSENHANDEL

## MASCUINEN-EXPURI BERLINWS — MOHRENSTRASSE 61

Approved For Release 2007/08/22: CIA-RDP80T00246A002500390002-0



Good
business connections
through
personal
contact

# SAAR FAIR

SAARBRUCKEN

HELD EACH SPRING

#### FARMING MACHINES 50



#### 50/001 50/001 3 PZ-35 Tractor-Mounted Three **Bottom Plough**

For ploughing cereal and technical row crops with specific resistance of 1.2 kg/cm<sup>2</sup> or 17 psi; ploughing depth up to 30 cm or 12". Working width 105 cm or 3 ft 5 in., weight 1400 kg мотокой or 3086 lbs.

#### 50/002 5 PZ-35 Tractor-Mounted Five **Bottom Plough**

Designed for ploughing cereal and technical row crops with specific resistance 1.2 kg/cm<sup>2</sup> or 17 psi; ploughing depth 30 cm or 12". Working width 175 cm or 5 ft 9 in.; weight 1990 kg or 4336 lbs. MOTOKOV

#### 50/003 MARS PICCOLO 332 Tractor-Mounted Three Bottom Plough

For light soils, to be used with Zetor 25. 25 A or 25 K tractors. Working width 75 cm or 2 ft 5½ in., maximum ploughing depth 21 cm or 8.3", weight c/w attachments 236 kg or 520 lbs. MOTOKOV

#### 50/004

#### 3 PN-35-D Tractor-Mounted Three **Bottom Plough**

Designed for Zetor tractor. Overall working width 105 cm or 3 ft 5 in.; maximum ploughing depth 28 cm or 11". Gross weight 420 kg or 1014 lbs.

#### 50/005

#### 3 PN-35-D Tractor-Mounted Three **Bottom Plough**

Differs from the 3 PN-35 plough by longer forecarriage. Gross weight 440 kg or 1095 lbs. MOTOKOV

#### 50/006

#### 3 PN-30 Tractor-Mounted Three **Bottom Plough**

See 4 PN-30 Plough. Working width: 90 cm. Weight: 380 kg.

#### 50/007

#### 3 PN-30 Mounted Three Bottom Plough

(with 3 PN-35 frame). Identical with 3 PN-35 plough; bottoms of 12". MOTOKOV

#### 50/008

#### 4 PN-30 Tractor-Mounted Four **Bottom Plough**

Overall working width 120 cm or 3'11"; maximum ploughing depth 24 cm or 9' Part of frame detachable; can de used as three bottom plough - 3 PN-30. Weight 460 kg or 1014 lbs. MOTOKOV

#### 50/009

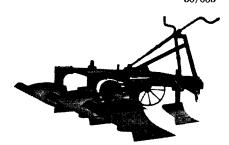
#### PN 532 Mounted Five Bottom Plough

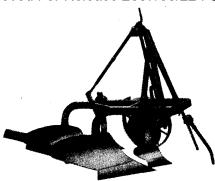
For stubble field skimming up to maximum depth of 10 cm or 4". Working width 125 cm or 4 ft, weight approximately 230 kg or 507 lbs. MOTOKOV

#### 50/010 PN 252 Mounted Two Bottom Plough

Working width of one bottom 30 cm or 12", overall working width 60 cm or 2 ft; maximum ploughing depth 25 cm or 10". Weight approximately 260 kg or 573 lbs. MOTOKOV

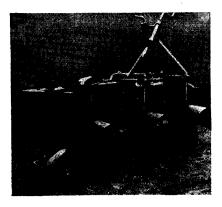
50/005





#### **50/011** 50/011 2 PNO-35 Mounted Two Bottom Reversible Plough

Designed for medium and deep ploughing for use with Zetor Super tractor on small and medium size sloping grounds, also for one-sided ploughing in level ground. Share cut 35 cm or 13.8", overall working width 70 cm or 27.6", maximum working depth 27 cm or 10.6". Weight approximately 450 kg or 903 lbs.



#### **50/012** 50/012 **3 PDN-35 Mounted Three Disc Plough**

Working depth adjustable from 12 up to 22, cm or from 4.72 up to 8.66". With discs set at maximum angle and maximum working depth of 22 cm or 8.66" the cut per one disc is 35 cm or 14", overall working width 105 cm or 3'5". Weight 440 kg or 970 lbs.

MOTOKOV

#### 50/013 2 PDN-35 Mounted Two Disc Plough

Ploughing depth variable from 12 up to 22 cm or from 4.72 up to 8.66", working width depends on cutting depth and setting of cutting angle. With discs set to maximum angle and at maximum working depth of 22 cm or 8.66", the cut per disc is 35 cm or 13.8"; overall working width 70 cm or 27.6". Weight 367 kg or 809 lbs.

MOTOKOV

#### 50/014 UPS All Purpose Forecarriage

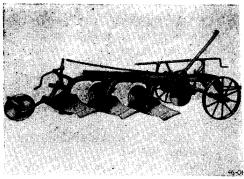
Basic component part of the Mars trailing plough range; carries depth control and lowering mechanism. Weight c/w attachments 190 kg or 418 lbs.

MOTOKOV

#### 50/015 U 22 Two Bottom Attachment

For use with the UPS forecarriage; for deep ploughing up to a maximum depth of 28 cm or 11"; overall working width 60 cm or 23.6". Weight of bare attachment c/w accessories: 225 kg or 496 lbs.

MOTOKOV



50/016

#### 50/016 U 322 Three Bottom Attachment

To be used together with the UPS forecarriage for deep ploughing to a maximum depth of 26 cm or 10.2"; overall working width 90 cm or 35.4". Weight c/w accessories: 345 kg or 760 lbs.

MOTOKOV

#### 50/017

#### U 327 Three Bottom Attachment

Serves together with the UPS forecarriage for medium deep ploughing to a maximum depth of 22 cm or 8.66"; overall working width 75 cm or 29.5". Weight of attachment c/w accessories: 280 kg or 617 lbs.

MOTOKOV

#### 50/018

#### U 51 Five Bottom Attachment

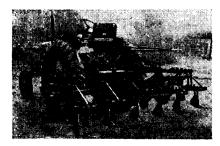
Serves together with the UPS forecarriage for skimming of stubble and to a maximum depth of 15 cm or 6"; overall working width 125 cm or 49.2". Weight of attachment c/w accessories: 245 kg or 540 lbs.

MOTOKOV

#### 50/019

#### UK 153 Cultivator Attachment

Serves together with the UPS forecarriage for preparing seed beds up to a maximum depth of 12 cm or 4.72"; overall working width 210 cm or 6'10.7". Weight of attachment 174 kg or 383 lbs.



#### 50/020

#### 50/020 KPN 6 A Mounted Beet Hoer

For hoeing of row crops spaced from 38 up to 80 cm or from 15 up to 31.5". At normal setting of hoeing assemblies the hoer operates as a sixrow type. Overall width 320 cm or 10'6"; weight c/w hoeing assemblies, accessories and signers approximately 571 kg or 1259 lbs.

MOTOKOV

#### 50/021 HMD/2 Single Bottom Animal Traction Plough

Working width 22 cm or 8.66"; cutting depth 6 to 14 cm or 2.36 to 5.51". Weight 24 kg or 53 lbs. MOTOKOV

#### 50/022

## HML/2 Single Bottom Animal Traction Plough

With one handle and RH slide. Working width 22 cm or 8.66"; maximum cutting depth 6 to 14 cm or 2.36 to 5.51". Weight 30 kg or 66 lbs.

MOTOKOV

#### 50/023 TP/100 Single Bottom Animal Traction Plough

Working width 17 cm or 6.69"; cutting depth 5 to 13 cm or 2 to 5"; weight 12 kg or 26 lbs.

MOTOKOV

#### 50/024

#### SP 6 LSt Single Bottom Animal Traction Plough

With land wheel. Working width 23 cm or 9"; cutting depth 9 to 17 cm or  $3^{1/2}$  to  $6^{3/4}$ ". Weight 40 kg or 88 lbs.

MOTOKOV

#### 50/025

## SP 7 LSt Single Bottom Animal Traction Plough

Light type; working width 25 cm or 10"; cutting depth 9 to 23 cm or 31/2 to 9"; weight 46 kg or 95 lbs.

MOTOKOV

#### 50/026

#### SP 9 R Single Bottom Animal Traction Plough

With plough share. Working width 30 cm or 12"; cutting depth 10 to 23 cm or 4 to 9"; weight 61 kg or 134 lbs.

MOTOKOV

#### 50/027

#### OPKSO St Single Bottom Animal Traction Plough

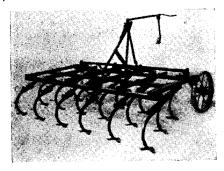
Reversible, with 5/6 NR forecarriage with. Working width 21 cm or 8.3"; cutting depth 6 to 15 cm or 2.36 to 6"; weight 65 kg or 143 lbs. MOTOKOV

#### 50/028

#### OPKSO St Single Bottom Animal Traction Plough

Reversible, with land wheel. Working width 21 cm or 8.3"; cutting depth 6 to 15 cm or 2.36 to 6"; weight 41 kg or 90 lbs.

MOTOKOV



#### 50/029

#### 50/029 KHN 280 Mounted Cultivator for Depth Loosening

The frame carries 19 clamps with tools. Maximum cutting depth 25 cm or 8"; pitch 15 cm or 6". Overall width and working width 280 cm or 9'3". Weight c/w implements approximately 529 kg or 1166 lbs.

MOTOKOV

#### 50/030 KN 170 P Mounted Cultivator

17 working tools attached in three rows in welded on yokes. Point pitch 15 cm or 6". Maximum cutting depth 12 cm or 5"; working width 255 cm or 8'4"; weight 300 kg or 660 lbs. Output at 6 km. p. h. or  $\bar{3}.73$  m. p. h.: 0.6 ha/h or  $1^{1}/2$  ac./h.

#### 50/031 KHZ 200 Trailing Cultivator

Working width 200 cm or 6'7"; maximum cutting depth 30 cm or 12"; 9 shovels. Weight approximately 750 kg or 1653 lbs. The machine is designed for depth loosening; it has various working tools. Working speed 5 km or 3.11 m. p. h.

MOTOKOV

#### 50/032 KPZ 260 Trailing Cultivator

Designed for preparing of level seed beds up to a resistance of 0.7 kg/cm² or 10 psi. Working width 262 cm or 8'7"; working depth maximum 15 cm or 6"; weight 550 kg or 1212 lbs; operation speed 3.5 km or 2.17 m. p. h.; output 0.85 ha/h or 2 ac./h at a speed of 3.3 km or 2 m. p. h.

#### 50/033 17-SVBP-105 Animal Traction Corn Drill

Roller system with bottom and top sowing set. The top sowing set serves for sowing voluminous seeds with delicate husks. Track width 200 cm or 6'7"; working width 178.5 cm or 5'10¹/4". Number of rows 17; row pitch 10.5 cm or 4.13"; weight 408 kg or 899 lbs. Output 0.83 ha/h or 2 ac./h at a speed of 5 km or 3.11 m. p. h. MOTOKOV

#### 50/034 UNIKUM 16-SLN-150 Mounted Spoon Drill

Suitable for sowing cereals and other field crops similar to cereals due to seed size and sowing standards. Working width 240 cm or 7'10½"; row pitch 15 cm or 6"; filling capacity 150 dm³ or 91.5 cu. in. Transport speed 15 km or 9.32 m. p. h. Maximum output at a speed of 8 km or 5 m. p. h.: 1.90 ha/h or 4.69 ac./h. Weight 470 kg or 1036 lbs.

MOTOKOV



#### 50/035

#### 50/035 All Purpose Corn Drill 35-SVBZ-75

Roller sowing system with bottom and top sowing set, enabling thick row sowing. Tread width of machine 300 cm or 9'10"; working width 262.5 cm or 8'8"; number of rows 35; row pitch 7.5 cm or 2.95"; weight 730 kg or 1499 lbs. Output 1.30 ha/h or 3.2 ac./h at a speed of 5 km or 3.11 m. p. h.

MOTOKOV

# **50/036 PDP** 120 Semi-Mounted Disc Skimmer

Skims soil to a depth of 8 to 12 cm or 3 to 5", sowing simultaneously stubble-field crops. Working width 120 cm or 3'11"; disc diameter 50 cm

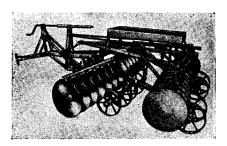


or 20"; 9 discs 18 cm or 7" pitch. Weight approximately 550 kg or 1212 lbs; output 1 ha/h or  $2^{1/2}$  ac./h.

#### **50/037** PPTZ-250 Trailing Disc Skim Plough

For skimming stubble land after cereals, legumens, oil plants, etc. to a depth of 5 to 8 cm or 2 to 3". Has 17 discs of 50 cm or 20" diameter; 18 cm or 7" pitch. Working width 250 cm or 8/2"; weight c/w sowing set approximately 1265 kg or 2789 lbs.

MOTOKOV



## **50/038 NTB 28 N Tractor Dise Harrows**

Crush clods, skim stubble land, cut meadow turf, etc. Number of discs 28; Disc diameter 45 cm or 17.7"; overall working width 224 cm or 74"; weight 506 kg or 1115 lbs. Output approximately 1.1 ha/h or 2½ ac./h at a speed of 5 km or 3.11 m. p. h. MOTOKOV

#### **50/039** TDBT 5A Tractor Tine Harrows

Designed for preparation of soil for seed beds, burial of growth, soil loosening, surface levelling, weed control, etc. Working width 480 cm or 15'9"; number of tines 100; tine spacing



4.8 cm or 1.9". Weight approximately 240 kg or 530 lbs. Output approximately 2.4 ha/h or 6 ac./h at a speed of 5 km or 3.11 m. p. h. MOTOKOV

#### **50/040** 2 SZ 210 P Fodder Rake (Piler)

Tractor-trailed, for piling or turning fodder. Working width of one part 210 cm or 6'11"; of both V-connected parts when piling: 520 to 600 cm or 17'1" to 19'8". When reverse-operating the drum, the machine turns the fodder, loosens it and airs it for faster drying. Weight of one part 495 kg or 1091 lbs. Working speed 7 to 8 km or 4 to 5 m. p. h.; output 2.4 ha/h or 6 ac./h.

#### 50/041 NOVITAS Fertilizer Spreader RPZ 300

Suitable for any type of tractor fitted with drawbar or tow hook. Working width 300 cm or 9'10"; filling capacity 144 dm³ or 8587 cu. in.; weight 260 kg or 572 lbs. Output 1.8 ha/h or 3.45 ac./h at a speed of 6 km or 3.73 m. p. h.

MOTOKOV

#### 50/043 VRN 3 Mounted Beet Digger

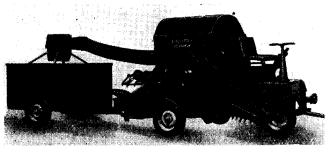
Digs three rows of beet by means of two LH and one RH point. Variable row spacing from 40 up to 50 cm or from 16 up to 20", working width 3 rows. Overall width of machine 170 cm or 5'7"; weight approximately 200 kg or 440 lbs.

MOTOKOV

#### 50/044 VRZ 3 Trailing Beet Digger

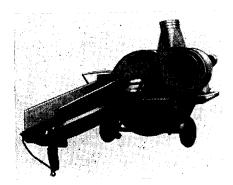
It is the VRN 3 mounted beet digger attached to the trailing forecarriage for mounted implements ZPN. Working width 3 rows. Weight: 440 kg or 970 lbs.

MOTOKOV



#### 50/045 SK 4 Four Row Tractor Potato Planter

Designed for row planting of any kind of potatoes, provided the bulb weight does not exceed 120 gr. or 4.24 oz. Spacing 62,5 cm or 26.37". Working width 250 cm or 8'2"; planting depth 14 to 16 cm or  $5\frac{1}{2}$  to 6"; filling capacity  $2\times120$  kg or  $2\times264$  lbs; weight 950 kg or 2095 lbs. MOTOKOV



## **50/046** 50/046 **Ensilage Cutter, Type ŘVM 37,**

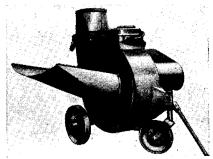
used for chopping dry or fresh fodder. Motor input; 5.5 kW, Speed 300 r. p. m. Output: 14 q of dry fodder, 40 q of fresh fodder per hour. MOTOKOV

#### 50/047 Ensilage Cutter, Type ŘV 42,

used for cutting dry or fresh fodder including straw behind the MA 90 thresher. Motor input 12 kW, Speed 500 r. p. m. Output: 40-60 q of dry fodder, 120-200 q fresh fodder with chopped straw, 20 mm long.

MOTOKOV

50/050



50/048

#### 50/048 Rotary Cutter, Type ŘRM,

used for chopping dry or fresh fodder and straw behind smaller threshers. Output: 20 q of dry fodder per hour. MOTOKOV



50/049 Flax Pulling Machine, Type TLZ 120 50/0**49** 

The machine pulls and deposits flax. It is used with tractors up to 25 H. P., weight 925 kg or 2035 lb., provided with P. T. O. Output: 3—4 hectares per hours.

MOTOKOV

#### 50/050 Flax Picker with Sheller and Binding Attachment, Type SLOZ,

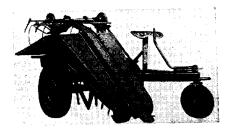
designed for picking, shelling and binding dry flax, pulled by the flax puller, hitched to the tractor. Also suitable for flax threshing in the field or barn. Output: 4—5 hectares per 8 hours.

MOTOKOV

#### 50/051 Flax Picker, Type SLUZ

The machine which is hitched to the tractor, picks and binds flax into bundles for further processing. Daily output: 2—3 hectares. Weight: 470 kg.

MOTOKOV



50/051

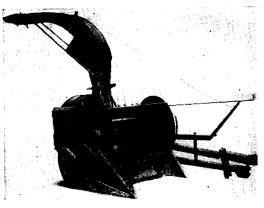
#### 50/052 Three-Stroke Milking Apparatus, Type DT 1

By removing a part the machine can be quickly converted into a two-stroke type. The third, rest stroke has a favourable influence on the health of the milk-cows. Weight: 10 kg. Capacity of can 18 litres.

MOTOKOV

#### 50/054 Forage Harvester, Type SŘZ 42

The machine serves for harvesting fresh forage including sunflowers and maize up to a height of 330 cm, as well as dry forage and straw left. Output: 150 to 250 q per hour according to the kind of fresh forage. 0.6 hectare of dry forage or straw per hour. Working width 130 cm. Weight 1300 kg.



**50/055** 50/054

Food Mixer, Type MJK - 300, designed for perfect mixing of all kinds of food. Output: 20 q per hour. Input of electric motor: 4 kW.

MOTOKOV

#### 50/056 Potato Grader, Type TB 10

The machine divides potatoes into four grades according to their size. Weight 800 kg. Speed of electric motor (N  $\equiv$  1.85 kW) 1400 r. p. m. Approximate output 20 q per hour.

MOTOKOV

50/052



#### 50/057 "ČERT" Potato Spinner

The spinner is an animal drawn, singlerow machine. Number of revolutions of the spinning wheel at a speed of 4 kilometres per hour 87/min. Weight 280 kg. Output per 10 hours: 2 hectares. MOTOKOV

#### 50/059 Semi-Mounted Mower with Adjustable Pitch, Type ŽT 183.1

The tractor semi-mounted right-hand cutter bar is flexibly hinged to the frame. Working width 183 cm. Maximum travelling speed during operation 6 km per hour. Weight 210 kg. Output 1 hectare per hour.

\*\*MOTOKOV\*\*

#### 50/060 Side-Mounted-Tractor Mower Z 25

#### 50/061 Tractor Grain Binder, Type ŽVZ 210

The machine is intended for grain cutting and binding. Cutting width 210 cm. Working speed 7 km/hour. Weight 850 kg. Output 1.5 hectare per hour.

MOTOKOV

#### 50/063 Sugar Beet Harvester, Type SKŘ 1

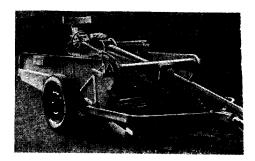
A single-row beet cropper. It cuts the beet leaves first and then digs the heads. The leaves and heads are conveyed independently into the bins. Output per 8 hours 0.8 hectare. Working speed 2.8 to 3.2 km per hour.

MOTOKOV

#### 50/064 Double-Row Potato Spinner, Type 2-VBZ

The machine works behind 25 or 30 H. P. tractors. It is used for spinning po-

tatoes, machine planted in 2 rows with an inter-row spacing of 70 cm. Working width 140 cm. Weight 650 kg. Output 0.45 hectare per hour. MOTOKOV

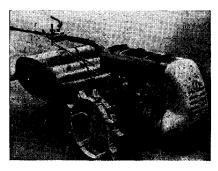


50/064

#### 50/065 MOTOROBOT Garden Tractor, Type PF 61

The machine is a small two-wheel tractor which finds a wide range of application in gardens, vegetable gardens, nurseries, orchards, parks, etc. in combination with suitable implements. Speeds 3 forward (3.5—4.5—8 km/hr.), reverse (3.5 km/hr.) Output 5 HP. Weight 350 kg.

MOTOKOV



50/065-066

#### 50/066 Rotary Cultivator, Type F 651

for use with PF 6 Motorobot, for soil loosening and tillage, especially suitable for vegetable gardens and orchards. Working depth 600 mm, or 400 mm in hard soil. Weight 109 kg.



#### 50/067

## **50/067** Farm Wagon, Type PV 81

A double-wheel PF 6 Motorobot trailer, used for handling a variety of hauling jobs. Load carrying capacity 800 kg, 210×135 cm.

MOTOKOV

#### 50/068 Riding Attachment, Type PP 23

The riding attachment serves for transport purposes and operation with implements requiring no attention (harrows, etc.). Weight 72 kg.

MOTOKOV

#### 50/069

#### Cambridge Roller, Type VCM-125

This Motorobot hitched implement serves for breaking up the soil crust. Weight 485 kg.

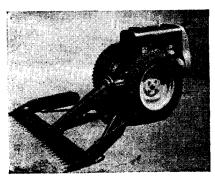
MOTOKOV

#### 50/070 Plain Roller WH

The roller which is attached to the PF-61 Motorobot hitch, prepares seed beds and breaks up clods. Weight 175 kg.

MOTOKOV

50/071



#### 50/071

#### Mower, Type Ž 151

for use with PF-6 Motorbot, serves for grass cutting. Working width 152 cm. Weight 110 kg. It operates at a Motorobot reverse speed of 3.5 kilometres per hour. MOTOKOV

#### 50/072 Orchard Plough, Type ZP-130

A single-share, reversible plough, hitched to the Motorobot tractor; it is suitable for ploughing medium heavy soil. Working width 25 cm. Weight of plough 52 kg.

MOTOKOV

#### 50/073 Disc Harrows, Type BDM-100

For use with Motorobot PF-61 tractors. The harrows serve for the preparation of seed beds and turning of stubble fields. Working width 100 cm. Weight 94 kg.

MOTOKOV

#### **50/074** Všerob 3-DHK Multi-Purpose Cultivator

A Motorobot PF-61 hitched implement for soil preparation and cultivation. Suitable for potato, beet or vegetable crops. Weight complete 138 kg. MOTOKOV

#### 50/075 Cultivator, Type KM-64

Hitched to Motorobot PF-61 tractor for soil loosening. Maximum working depth 9 cm. Working width 64 cm. Weight 40 kg.

MOTOKOV

#### 50/076 Inter-Row Cultivator, Type KRM-116

This PF-61 Motorbot hitched implement is used for weed control and soil aeration. Working width 116 cm. Maximum working depth 120 cm. Weight 40 kg.

MOTOKOV

## **50/077**Belt Pulley, Type N-12

This special attachment to PF-61 Motorobot tractors, is used for driving agricultural machines.

MOTOKOV

#### 50/078 Post Hole Digger, Type VLM

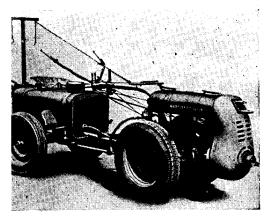
This PF-6 Motorbot semi-mounted implement is used for digging holes for setting trees and bushes. Diameter of holes 28 cm. Maximum digging depth 30 cm. Weight 60 kg.

MOTOKOV

#### 50/079 Post Hole Digger, Type VM

This semi-mounted implement for PF-6 Motorobots serves for drilling perpendicular and diagonal holes, 30 or 45 cm in dia., to a depth of 70 cm. Diameter of holes 30 or 45 cm. Maximum digging depth 70 cm. Weight 340 kg.

MOTOKOV



50/080

#### 50/080 Spraying Attachment, Type PM-200

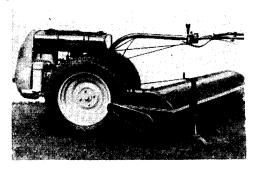
This PF-6 Motorbot attachment serves for pest control of orchards and vegetable crops. It provides a flat, high spray even for trees. Approximate weight 220 kg. Tank capacity 200 litres. Output 180 to 350 sprayd trees per hour.

MOTOKOV

## **50/081** Power Brush, Type ZM-12

This Motorobot implement serves for brushing and sweeping yards, lawns, play grounds, etc. Working width 126.5 cm. Working speed 4 to 5 km//hour. Approximate weight 160 kg.

MOTOKOV



50/081

## **50/082** Saw Bench, Type PCM-65

The PCM-65 saw bench which is designed for use with PF16 Motorbot tractors, serves for cutting wood. Weight 83 kg. Speed of blade 1900 r. p. m. 2 operators. Approximate output 2 to 4 cu. metres per hour according to the kind of wood.

MOTOKOV

#### **50/083** PRIM-152 Reaper

The reaper serves for cutting corn. The cut corn in deposited in bunches in the stubble-field. Length of cutter bar 152 cm. Weight c/w assembly 439 kg. Maximum cutting speed 6 km/hour.

MOTOKOV

## **50/084** Thresher, Type MA 90

The thresher is used for threshing all kinds of cereals, legumes and oil plants. The 25 kW, type RFU 92 A electric motor for 380/220 V a. c. develops a speed of 2960 r. p. m. Output 20 q of wheat per hour, of 43.5 p. c. yield and 16 p. c. moisture content. 4 to 5 operators.

MOTOKOV

50/084

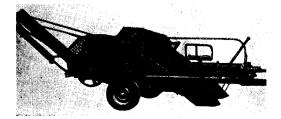


#### 50/085

#### Automatic MAJ-90 Thresher with Clover Shelling Attachment

The threseher is intended for clover threshing, shelling and cleaning. It can also be used for threshing grain and leguminous plants without dismantling the sheller. Weight about 4000 kg. Output 150 kg/hour.

MOTOKOV



50/086

#### 50/086 Pick-up Baler, Type SLK-130

The machine picks up and bales straw or forage in the field which it delivers on slide rails to the trailer. Weight 1400 kg. Output  $\frac{1}{2}$  to 1 hectare per hour.

#### **50/087** Straw Baler, Type LS-130

The machine presses and bales straw. Length of bales 300 or 500 mm. Output 30 to 35 q per hour. Weight 1025 kg. MOTOKOV

#### 50/089 Grain Blower, Type Z-3-A

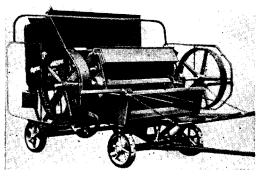
The machine is used for the pneumatic conveying of grain. Approximate weight with kW electric motor and accessories 415 kg. Output at a length of 40 metres and height of 10 metres 50 q per hour. The machine can be easily transported and prepared for use.

MOTOKOV

#### 50/090 TORON Hay Blower

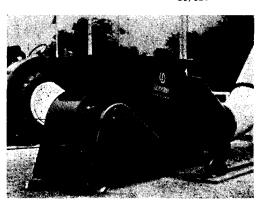
The blower is used for the pneumatic conveyance of stalked plants, such as hay, straw, etc. The S 2/II type can be used with pulley block behind a thresher and the S 2/III with own electric motor types are suitable for use with a thresher. In addition, the S 2/III serves for conveying all kinds of fodder. The output of the machine depends on the speed of the fan. It amounts approximately to 2500 kg per hour.

MOTOKOV



50/089





#### 50/091

## Hay Blower, Type VSDP with Feeding and Crushing Attachment

The blower is used for the pneumatic conveyance of stalked plants, such as hay, straw, etc. Output 3000 kg of hay delivered to a distance of 30 metres and a height of 10 metres per hour at a speed of 1220 r. p. m. 380 V, 1300 r. p. m., 9 kW electric motor.

MOTOKOV

#### 50/092 Two-Wheel Trailer, Type DP 2.5 S

The trailer can be tipped to two sides and to the rear by means of a hydraulic telescopic cylinder, fitted to the hydraulic power lift. The trailer is provided with a hand brake acting on the two wheels, within the driver's reach. Length 440 cm. Carrying capacity 2500 kg. Weight 760 kg. MOTOKOV

#### 50/093 Tractor Trailer 3.5 PVB 2

The spring mounted trailer has a payload of 3.5 tons. It is provided with an air-pressure brake and mechanical hand brake. Carrying capacity 3500 kg. Weight 1450 kg.

MOTOKOV

## **50/094** Farm Wagon, Type PV 2.5

The animal drawn farm wagon is unsprung and its box is not tiltable. The cargo platform is  $180\times395$  cm in size. Carrying capacity 2.5 tons. Weight 955 kg. MOTOKOV

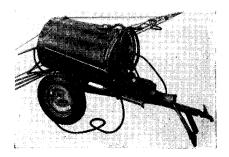
#### 50/095 Manure Loader, Type NH-100-A

The hydraulically controlled loader is hitched to the 225 K tractor. Its tower can be turned by 380°. The forks can be substituted for a shovel. Weight of the loader 800 kg. Working pressure 70 atm. Extension of grab 1000 mm. Capacity 120 to 150 q per hour.

#### 50/097 Mounted Fertilizer Distributor

The machine is designed for use with 15 H. P. tractors. Working width 3 metres. Box capacity 600 kg. The simple frame of the machine can be dismantled.

MOTOKOV



50/098

#### 50/098 Tractor Drawn Sprayer, Type P-900

The machine is used for pest control of field crops and fruit trees. It can also be used for other sanitation purposes. By means of a spraying frame the machine can be adjusted for wide field spraying, or adapted to high-pressure hoses for spraying trees and bushes. Piston type pump. Output of pump 40 litres per min. For flat 10 metre spraying, adjustable from 250 to 750 litres per hectare. Weight with liquid 1430 kg.

MOTOKOV

#### 50/099 Logging Truck, Type DT 7

Useful load 7000 kg. Permissible speed 30 km/hour. Permissible overall weight 9420 kg. MOTOKOV

#### 50/100 Liquid Manure Tank Car, Type FPT-2.5

The trailer is used for the transport of thick or thin liquids. It is also suitable for spraying. Compressor capacity 200 cu. metres per hour. Maximum permissible load 5610 kg. LK 70/70 compressor. Capacity of tank 2.5 cu. metres.

MOTOKOV

#### 50/111

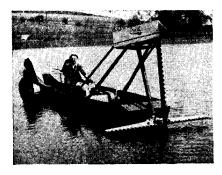
#### Dehydrated Ammonia Spreader

Comports two undercarriages with tanks and ammonia spreading set on cultivator. Tank capacity 535 litres or 117.7 Imp. gallons. Weight 1850 kg or 4078 lbs.

#### 50/112

#### RAG 1 Hand Operated Aerosol Generator

For pest control of vegetation by mist. Weight c/w petrol or aerosol charge 11.7 kg or 25.76 lbs; consumption per hour: 1.5 litre or 1.32 Imp. quart petrol and/or 4.5 litres or 1 Imp. gallon aerosol.



#### 

For mowing water plants of every description.

#### 50/115

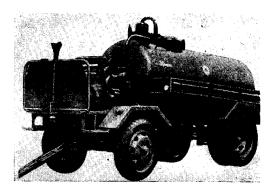
#### Rymipol Fodder Mixer

For mixing of fodder; enables also weighing of individual fodder kinds, washing and de-sprouting of potatoes. 4 metr. q. or 880 lbs fodder prepared within 12 minutes, including weighing of individual fodder kinds and emptying of machine.

#### 50/116

#### Mobile Scalding Set PK-20

Fully automatic, high efficiency set for potato scalding, mounted on a special undercarriage. Output 1500 to 2000 kg or 3300 to 4400 lbs potatoes per hour. Weight 4200 kg or 9258 lbs.



## **50/117 Mobile Brass Sprayer No. 3**50/100

Serves for liquid mist spraying of vineyards, orchards, etc. on large scalé. Extension atrachements enable also height spraying. Capacity 40 letres or 8 g. I. m. p. gallons.

MOTOKOV

#### 50/118 MTZ 8 Tractor Dung Sprayer

For surface dung spraying and simultaneous hoeing or chiseling of row crops, particularly of beet; especially suitable for cultivation of sugar beet and botato hilling. Working with 3000 mm or 9 ft. 10 in. Operating speed: 4 to 6 km. or 2.49 to 3.73 m. p. h. Travelling speed: max. 20 km. or 12.4 m. p. h. Weight 1600 kg. or 3527 lbs.

## **50/122** Husking Machine

For husking dry corn husks. Supersedes manual corn husking. 3 operators needed. Maximum weight 350 kg or 770 lbs. Drive: electric motor of 4 kWh power output or combustion engine of 5 HP power output.



## **50/123** Z 102 Grain Blower

for pneumatic transport of grain and loose material in silos and large farms. Output 12 t/h, weight 460 kg without accessories.



## **50/124** Z 103 Grain Blower

for pneumatic transport of grain of all kinds for a medium sized farms. Output 6 tons per hour. Weight 160 kg.

#### **50/125** OSO-57 Grain Deduster and Aspirator

is a newly designed machine to be used particularly by grain silos. This machine separates completely the dust particles contained in grain and at the same time removes 100% of grain pests. Maximal output 10.000 kg/h.

#### 50/131 Mvs Adjustable Motor Reamer

for turning and reaming of main bearings of crankshafts in engine housings.

#### 50/132 Hay Blower

is made of sheet steel. Frame is mounted on a two wheel undercarriage, diameter of pipes 500 mm. Output: 1 ton of fodder in 10—15 min. Weight with the electromotor but without accessories 210 kg.

#### 50/133 Doudo Plough

is a frame, animal drawn two bottom reversible plough with leverage for depth control. Working width 48 cm, depth 6—20 cm, weight 125 kg.

#### 50/134 ZP 130 Garden Plough

single bottom reversible plough mounted on PF 6 Motorobot. Working width 25 cm, maximal plouhing width 21 cm, weight 52 kg.

#### 50/135 Matador Plough

is a robust, two bottom animal drawn frame plough for all soil kinds and soil conditions. Working width 44 cm, maximal ploughing depth 6—20 cm, weight 68 kg.

Are you interested in Czechoslovak products?

## CZECHOSLOVAK FOREIGN TRADE.

a periodical of the Chamber of Commerce of Czechoslovakia, regularly contains reports on traditional export articles as well as novelties of the Czechoslovak industrial production.

#### 51 FIRE EXTINGUISHERS AND EQUIPMENT

#### 51/001 Two-wheel Motor Fire Engine DS 16

Suitable for major fire brigades in places where water source is inaccessible for four-wheeled fire engines. Maximum pressure 160 m, or 994 ft. Weight 900 kg or 1984 lbs.

MOTOKOV

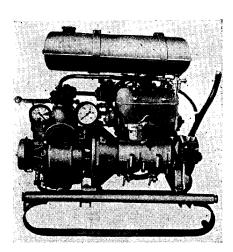
#### 51/002 PP8 Heavy Duty Trailer

for transport of PS 8 portable power fire engine c/w attachments.

MOTOKOV

#### 51/003 PPS 8 L Light Trailer

for transport of PS 8 portable motor fire engine c/w accessories. MOTOKOV

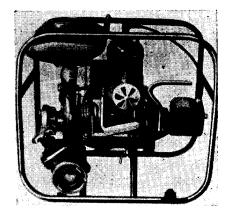


51/004

#### 51/004 PS 8 Power Fire Engine (Portable)

for inaccessible places.

MOTOKOV



51/005

#### 51/005 PS 3 Power Fire Engine (Portable)

for places inaccessible for heavy machines, for impassable spots. Nominal water flow 300 lt./min., 66 Imp. gall./ /min. Weight 35 + 90 kg or 77 + 198 lbs. MOTOKOV

#### 51/006 ŽD 18 Two-Wheel Ladder

for erection or fire extinguishing purposes. The design ensures reasonable load at full travel.

MOTOKOV

#### 51/007 VP 200 Foam Fire Extinguisher (Mobile)

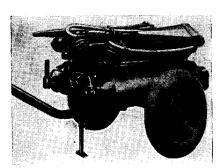
for extinguishing of liquid combustibles by means of air-mechanical foam. The device is independent of water sources and suitable for prompt fire extinguishing without any loss of time. Nominal capacity 200 litres, 44 Imp. galls. Volume of generated foam 1600 litres, 352 Imp. galls. Weight of charged device 550 kg or 1212 lbs.

MOTOKOV

## 51/008S 4 $\times$ 25 Snow Fire Extinguisher (Mobile)

for extinguishing of any kind of inflammable matter, particularly of H. T. electrical equipment. Filling capacity 100 kg, 220 lbs. Gross weight 515 kg, 1135 lbs.

MOTOKOV



# 51/009 $$^{51/009}$$ S 2 $\times$ 25 Snow Fire Extinguisher (Mobile)

for extinguishing any inflammable matter, particularly of electrical equipment, also H. T. equipment. Filling capacity 50 kg, 110 lbs. Gross weight 203 kg, 447 lbs.

MOTOKOV

# 51/010 S $1 \times 25$ Snow Fire Extinguisher (Mobile)

for extinguishing any inflammable matter, particularly electrical equipment, even H. T. leads. Filling capacity 25 kg, 55 lbs. Gross weight 105 kg.

MOTOKOV

#### 51/011 SZ 20 Hold All Fire Sprayer

for ensuring fire safety in houses and minor workshops. Filling capacity 20 lt., 4.4 Imp. galls. Gross weight 32 kg, 70.5 lbs.

MOTOKOV

#### 51/012 V 10 Water Fire Extinguisher

for any matter likely to be extinguished with water. MOTOKOV

#### 51/013 P 10 Foam Fire Extinguisher

particularly suitable for liquid combustibles. MOTOKOV



#### 51/014 Fire Extinguisher PR 6

Powder type, for liquid inflammable materials where would cause damage.

MOTOKOV

51/014

#### 51/015 T1 - 2.5 - 6 Tetrachlore Fire Extinguisher

for liquid and solid combustibles. MOTOKOV 51/011



51/017

VP 10 Foam-Air Fire Extinguisher

S 1.5 and 6 Snow Fire Extinguisher

for extiguishing of liquid combustibles by means of air-mechanical foam.

Universal extinguisher for any kind of inflammable matter. MOTOKOV inflammable matter.

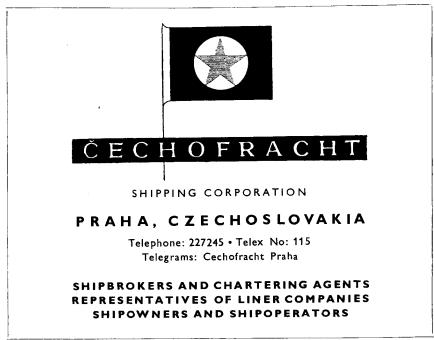
#### BEARINGS **52**



#### Roller Bearings

single row, double row radial roller bearings, uni-directional, single row

axial roller bearings, two-directional, double row tapered roller bearings. ĸovo

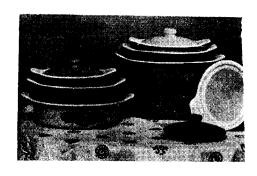


## Approved For Release 2007/08/22 : CIA-RDP80T00246A002500390002-0 **53 ΚΙΤ C H E N W Δ R E**

#### 53/001 Household, Hotel and Other Kitchenware

REAL NORMA enamelware, plain, medium-weight or heavy; decorated, hotel type DOSMA-SN enamelware with reinforced bottom up to 60 cm. in dia. and a capacity of 120 litres.

ELEKTRO-DOSMA enamelware with reinforced bottom, especially adapted to electricrange plates, up to 30 cm in dia





#### 53/002 Sfinx Iron Kitchenware

cast, enamelled.

#### 53/003

#### Aluminium Kitchenware

thick, polished or brushed.

Kitchenware with strong bottom, 6 to 10 mm. for electric kitchen ranges.

MOTOKOV

ALUSPOR Cast Aluminium Kitchenware for electric, gas or coal fired ranges.

MOTOKOV



SANDRIK Aluminium Kitchenware with specially reinforced bottom, for hotel kitchens.

MOTOKOV

MEVA aluminium coffee-pot in modern shapes and with insulated handles.

MOTOKOV

Milkpot (double-plated). The milk is boiled over a water bath. The pot is provided with a steam-whistle.

MOTOKOV

SANDRIK restaurant boiling-tub for dumplings. MOTOKOV

Restaurant aluminum pot with draincock. MOTOKOV

Aluminium sports requisites, canteens, field bottles, foodboxes. MOTOKOV

#### 53/004 INOXYDABLE Stainless Steel Kitchenware

MOTOKOV

Grater, made of one steel-plate, stainless. MOTOKOV

#### 53/005 Galvanized Kitchenware

Washing pots, water buckets, tubs, etc. MOTOKOV



#### 54 HOUSEHOLD KITCHEN MILLS

#### Household Kitchen Mills, Kitchen Robot

hand-operated. Meat-mincers, fruitpresses, mills for grinding spices, poppy seeds, etc., bun graters, bread cut-

Universal grating machine MARS

Dough making machine with rotary
bowl. MOTOKOV

Sauce or vegetable strainer, with various perforated bottoms. MOTOKOV

Turkey coffee-mills.

MOTOKOV

MOTOKOV

Coffee-mills BO.

TRAMP pocket mills. MOTOKOV

Mills for spices BO - small barrels.

MOTOKOV

Maize grinders.

Kitchen Robot

The machine can be driven from an electric motor.

MOTOKOV

#### 55 KITCHEN UTENSILS

#### Tinned Sheet or Wire

Onion slicers, can openers, slicers, tomato cutters, etc.

MOTOKOV

Baking forms, forms for pastry, vegetable slicers, egg beaters, dish baskets, etc. Large trays of 5 to 40 litre capacity, for canteens.

MOTOKOV

243

MOTOKOV

#### 56 FLAT-IRONS, COOKERS, LAMPS

Wick petroleum lamps with glass chimney. Hurricane lanterns. Brass petroleum cookers, noiseless petroleum cookers and parts. Spirit cookers with cylindrical or round globe and parts. Oil stoves. MOTOKOV

#### 57 CLEANING REQUISITES

Parquet shavings. Fine steel wool. ALORIT wool for washing aluminium kitchenware. Steel wool sponges. Poly-

amide sponges, multicoloured, for washing plates and dishes. MOTOKOV

#### 58 CUTLERY

## **58/001** Cutlery

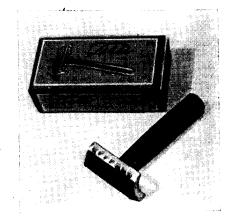
Plain steel and corrosion-proof knives. All kinds of butchers' knives. Artisans' knives. Folding knives. Plain or stainless pocket knives, hunting knives, daggers. Kniře sharpeners. Stainless saw kniwes for hot pastry or tomatoes. Forged knives for cooks. Tweezers. Razor blades. Scissors and shears, sheep shearing shears. Hacking knives. Twoprong forks for meat. Potato scrapers. Fowl shears. Folding knives.

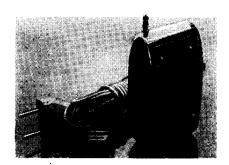
#### 58/002 Shaving Requisites

All kinds of razor blades. Shavers made of plastics. PRAGOEXPORT

# **58/003 ALFA** Electromagnetic Vibration Shaving Apparatus

Voltage 220/120 V, 6,5 W.





#### 59 TABLEWARE

#### 59/001 Table-Sets

Knives, forks and spoons with hollow handles, silver-plated or made of pressed or cast aluminium, with ALSA stainless knifeblades. Various silver-plated products for hotels or house-hold.

MOTOKOV

#### 59/002 Tableware

Trays, vases, liqueur sets, bread crum pans for restaurants or household use in various shapes.

MOTOKOV

#### 59/003 Sundry Tableware

Cocktail-shakers, cocktail strainer, sets of trays for glasses, coffee-mills and coffee-machines, stainless gherkin tongs, stainless trays, boiled egg cutters, percolators, tea cups, stainless ice-cream cups, apple cutters, tea spoons, beer warmers. Corkscrews, can openers, nutcrackers, etc. MOTOKOV

## 60 ELECTRIC HOUSEHOLD APPLIANCES

Single-plate cookers, 145 or 180 mm. in dia., with or without change-over switch, two-plate 038 cookers with tubular plates.

Immersion cookers 181 and 182.

Electric flat-irons with thermostat and moistener, or plain flat-irons with switch.

#### Ironing press E 200.

Coffee-mill 024 with mixer and egg-beater.

Egg-beater in a glass vessel 433 N.

Double egg-beater.

Five-speed mixer with fruit-separator.

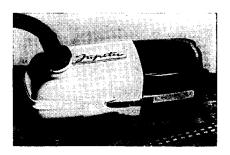
Electric PORKERT kitchen robot ÚKS.

Parquet polishing machine 722.

PEROTA washer.

PEROBOT washer.





Square PEREX washer.

MORETA flow washer.

Linen drier.

Accumulating stoves.

Cushion for invalids.

Hot water tank.

Hair-drier No. 519.

Single-head shaving machine.

Vibrating shaving machine EM 550.

Double-head shaving machine.

Spare baking plates for electric ranges, 145 or 180 mm. in dia.

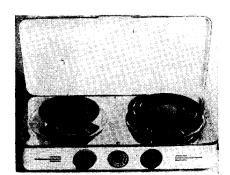
VAŘENKA double-cooker for roasting and stewing.

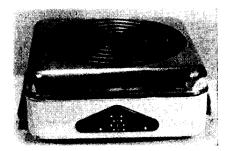
 ${\bf Electric}\ \ {\bf oven}\ \ {\bf with}\ \ {\bf inspection}\ \ {\bf window}.$ 

Electric kitchen range T 130.

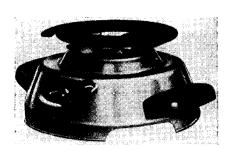
Electric automatic kitchen range T 131.

MOTOKOV









# 61 HOUSEHOLD AND FOODSTORE REFRIGERATORS

Electric compressor type CALEX reprigerator, capacity: 100 litres.

Electric CALEX refrigerator, capacity: 150 litres.

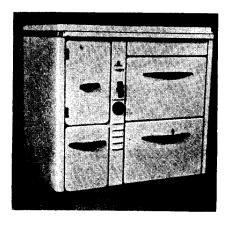
Electric ELEKTROSVIT absorption refrigerator, capacity: 60 litres.

ELEKTROSVIT household petroleum refrigerator, absorption type, capacity: 60 litres.

SVEZA refrigerating set, 10—200 cal. for refrigerators to 450 litres.

Refrigerating set of CALEX 100 litre compression refrigerator. MOTOKOV

#### 62 HOUSEHOLD GAS APPLIANCES



Gas kitchen ranges with thermostat, oven inspection hole, with automatic ignition, etc.

Gas kitchen range with electric oven.

Gas kitchen range 116.

Automatic gas kitchen range.

Plain gas ovens.

Gas ovens with twin gas cooker 611.

Twin gas cooker with MORA 323 grill.

MORA 310 three-burner gas cooker.

Gas frier-cooker 811.

Gas hot water reservoir, capacity:

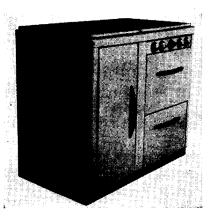
80 litres.

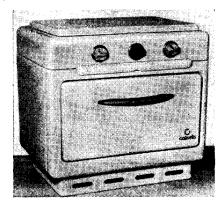
MORA P 5 Gas flow heater.

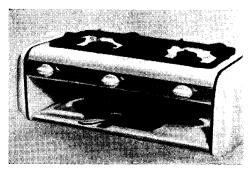
MORA PO 13, PO 35 gas flow heaters.

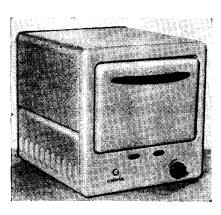
Bathroom gas water heater, type BRUTAR.

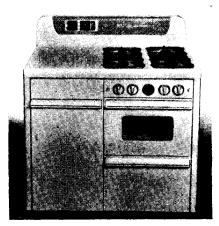
MOTOKOV



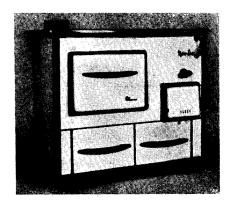








## 63 COAL FIRED KITCHEN RANGES



FAVORIT 123 kitchen range with two baking ovens.

 $\ensuremath{\mathsf{KS}}$  144 combined gas and coal kitchen range.

MORA 125 coal fired kitchen range.

Coal fired kitchen ranges: LUXOR  $18{\times}33$  cm, LUDO, MEOLUX 45, META.

KABOR kitchen range stove, enamelled.

Coal fired kitchen range 502 for farmers, two ovens.

BRUTAR boiler type stove, coal fired. Base of coal fired water heater.

MOTOKOV

## 64 STOVES, COAL FIRED





CLUB I and II, ŽIARA, THERMO 13, PETR 8.

Hot-air stove 687 for large rooms.

Fireplace insert 1330.

MUSGRAVES 8 stove.

MOTOKOV

## 65 PERAMBULATORS AND CHILDREN'S CARTS

Quilt, knitted or folding peramulators.

Bicycles, tricycles, puppet carts, scooters, children's pedal automobiles.

MOTOKOV

#### 65/002 Perambulators

Deep and sports types of every description.  $% \left( \frac{1}{2}\right) =\left( \frac{1}{2}\right) \left( \frac{1}{$ 





#### 66 MECHANICAL TOYS

SOKOL aeroplane, fastened to an arm, driven by means of a flashlight battery motor.

Horizontal steam boiler, a suitable toy for children up to the age of 10, with accessories: a wind-mill, crane, power hammer, saw and transmission.

Vertical steam-engine with flywheel.

PEROTKA washer for girls up to the age of 14.

Motor car with clock-work. The motor car can move in any desired direction.

Flywheel type motor car, designed to move forwards or reverse.

Cistern. Clock-work drive.

Fire engine with telescopic ladder and hose. Clock-work drive.

Tilting platform truck. Clock-work drive.

Breakdown lorry. Clock-work drive. The lorry moves on straight and solid ground. It is provided with a revolving crane with jib, attached to its silon turntable.

Electric ŠKODA 1200 SEDAN motor car; electric motor drive; remote control.

Ambulance, refer to the preceding item.

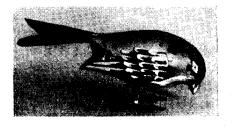
Clock-work motor car, figure eight circulating type.

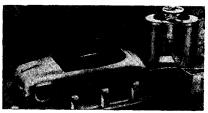
Patrol-service boat; solid spirit fired diaphragm boiler.

Racing boat. Clock-work.

ORAVA launch. Most parts are made of silon fibres. The propeller is motor driven.

PRAGOEXPORT







#### 67 SPORTS GOODS



Square aluminum food-boxes in various sizes. Round aluminum food-boxes with glass lining for butter, jam, etc. Aluminium canteens. Aluminium fieldbottles. Metal folding chairs. A complete line of fishing tackle. Various types of ski-binding. Ski edges, ski boot fittings, ski sticks.

Skates, children's skates, figure skates, goal keeper's skates Canada, Special, Junior, Rytmus, Stadion, Elán, Mignon, Dasino, Mensor, King Leonidas.

Darling children's skates, Elite 123, Waltz 225, Sport 171 pointed skates, Junior 505 children's icehockey skates, 550 speed skates, Hockey Canada icehockey skates, Rekord 966/1, Zenith 906, Kraso 976 special figure skates, Canada 502 ice-hockey skates, Globus 811 take-off skates, Globus 811 z figure skates.

\*\*PRAGOEXPORT\*\*

#### 68 LUMINAIRES 69 FLASHLIGHT BATERIES

#### 68/001 Luminaires

Lighting fittings. Fluorescent tubes for workshops and rooms. Period chandeliers. Operating lights. GLASSEXPORT MOTOKOV

#### 68/002 Film Studio Illumination

Various designs of lights. Theatre reflectors. Mine lamps. Industrial outdoor lamps. Marine lanterns.

MOTOKOV

#### 69/001 Pocket-Torches

MOTOKOV

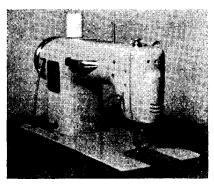
#### 69/002 Bicycle Reflectors

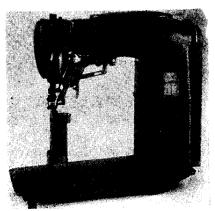
Small, large, front and rear reflectors; dynamoes. MOTOKOV

#### 70 HOUSEHOLD OR DRESSMAKERS' SEWING MACHINES

70/002







#### 70/001

#### **Household Sewing Machines**

Lada 233, Lada 236 (N I 58) portable, Lada 132 portable, Minerva 122, 123, KOVO

#### 70/002

#### Dressmakers' Sewing Machines

Minerva 224 single needle sewing machine, Two-needle sewing machine 1246, Single- or two-needle sewing machine 1057 with arm and feder. Footwear sewing machine 1090 with trimmer. Footwear single-needle sewing machine 1192. KOVG

#### METAL TUBING FURNITURE 71

#### 71/001 Household Metal Tubing Furniture

Drawing rooms, folding beds, couches, chess-board tables, flower stands, radio receiver stands, children's beds, beds, nightstands, chairs, arm-chairs, stools, dining room tables, garden furniture. LIGNA

71/002 School Metal Tubing Furniture Desks, chairs, tables, lecturer's desks, black-boards. LIGNA

#### 71/003

#### Office and Workshop Furniture

Fire-proof cabinets, safes, planning cabinets, various filing cabinets, orga-plans, lockers. PRAGOEXPORT MOTOKOV

#### 71/004

Hospital Metal Tubing Furniture

LIGNA

#### **72** SCHOOL AND OFFICE REQUISITES

Pencil sharpeners, stapling machines, perforators, numbering machines, letter files, letter stands, paper clips, drawing pins, nibs, etc. Letter balances, letter file mechanism, note book accessories, perforators, drawingboards, drawing requisites, pantographs, perspectographs, planimeters, school and technical mathematical instruments and parts, logarithmic rulers.

**PRAGOEXPORT** 

#### **73** SMALLWARE AND OUTFITTING **ARTICLES**

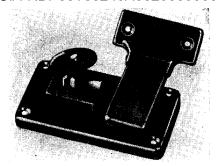
Shoe tacks, wooden pegs, heel tips, shoe buckles, trouser buckles, buttons, hooks, trouser hangers, cigarette cases, tobacco boxes, cigarette-lighters, pow-

derpuffs, various smokers'requisites, bagmakers'fittings (briefcases, trunks, etc), snap-fasternes, sew-on buttons, riveting buttons, fancy buckles, eylets

and hooks, velvets, barber's requisites, fitting for braces and suspenders, safety pins, film reels, seals, knitting needles, crochet needles, tin-openers, thimbles, slide fasteners, razor blade sharpeners.

Chainlets, blinds, etc. Buttons, up-holsterer's tacks, handbag fitting, suitcases, umbrella fittings, umbrelas, zip-fasternes, lipstick cases. All kinds of needles, card and gill pins. Key rings, coat hangers, joiners' fitting, spring-hooks, saddler's fitting. Curtain poles, mouldings.

\*\*PRAGOEXPORT\*\*



73

#### 74 FITTINGS

Househoold-pipe, gas-pipe, laboratory, sanitary, porcelain fittings, central heating fittings, fountains, regulating cocks, air-valves, pressure gauge accessories, compressor fittings. Measuring instruments, such as gas-meters, water-gauges, pressure-gauges.

PRAGOEXPORT MOTOKOV KOVO

#### 75 METAL CONTAINERS

50, 100, 200, 400 or 600 litre barrels. Drums, cylinders, transport cases. Dustbins. Narrow or wide neck cans. Tinned or aluminium milk-cans. Plain tins. Teaor coffee-tins, etc. Tubes and coils.

MOTOKOV

#### 76 FURNITURE AND BUILDING FITTINGS

Brano automatic door-closers, Mortice and other locks. Builders' hardware, Bomero hinges, spring type closers, door stops, door catches, window fittings, door bolts, pulls. Builders' iron mongery, such as handles, knobs, window buffers, etc. Cylinder mortice door locks,

iron cylinders for locks, plain mortice locks. Furniture locks, tumbler mortice dead locks, castors, plain furniture locks. Curtain poles. Galvanized sets for sinks. Furniture and piano hinges.

MOTOKOV

#### 77 HARDWARE

Braces, hand drills. Socket wrenches. Bricklayers' tools. Various types of pliers, hammers, hand vices, spanners and box spanners. Plate shears, watchmaker's tools. Electric solders, electric glue-pots. Tool kits. All types of vices.

Angle irons, water levels, measuring tapes, folding metres and measuring instruments. Shovels, bars, hoes, pickaxes, etc.

MOTOKOV Rollerchains, Gall chains, Busch chains, Oil field chains, PIV chains.

#### 78 PREFABRICATED BAYS

Garages  $3\times5$  metres, bays  $7\times5$  metres,  $7\times15$  metres. Bicycle stands. MOTOKOV

**79 ART** 

Manufacture of statues, plaques, badges, medals, grates. MOTOKOV

#### 80 LAUNDRY AND CLEANING EQUIPMENT

Washing machines, hydroextrators, ironing presses, drying equipment and implements.

MOTOKOV

#### Barbers and Hair Dressing Equipment

**80/002** ÚSV 2 Hair Drier

for drying of hair in larger hair dressing shops. There can be connected up to six drier to one central ventilator.

#### 80/003 Permanent Wave Electric Apparatus

Operational Voltage 220 V. Input 1080 W. Weight 25 kg.

#### 80/004 DRUKOV Barbers and Hair Dressing Equipment

Stool. FAK barbers semi-American chair. The chair is practical, the back is tiltable. The men's table No. 1. serves as corner table if there are more tables. Ladies metal chair can be used either for manicuring or hair drying. Men's table No. 2 for men's service can be also used as a centre table. Ladies table No. 103 for simple service. Ladies table No. 107 for several operations. Footrest, children revolving, ladies chair of metal has a tiltable back; manicuring table.

## Hospodářské noviny

an economic Weekly, keeps well informed economic workers whose primary interest is to follow and foster

- · economic utilization of new technology
- · increase of the productivity of work and
- decrease of costs
   In industry, building industry, transport,
   agriculture and trade, as well as
- economic utilization of raw materials, fuel and power

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Advertising Agency,

13, ulice 28. října, PRAHA I

#### 81 MEDICAL APPARATUSES

Examples of complete medical working places, e. g., complete dental surgery, complete operating theatre, X-ray equipment. Mobile equipment for mass chest survey of large groups of citizens, mobile dental ambulance for the visitors of the exhibition. Of the exhibited medical apparatuses we introduce the following:

#### 81/001 STE 36 Dental Oil Sterilizer

For sterilization of dental handpieces and angles at a temperature of 140—180 C. KOVO

#### 81/002 CHIROSTERIL Electric Hot-Air Sterilizer STE 43

For sterilization of surgical instruments, dressing material, laboratory glass-ware, etc. KOVO

## 81/003 Sterilizing Dressing Containers

Designed for sterilizing and sterile storing of dressings, waddings, bandages, etc.

KOVO

#### 81/004 Sterilizing Dressing Drums

Designed for sterilizing and sterile storing of dressings, waddings, bandages, etc.

KOVO

#### 81/005 NEOSTERIL Sterilizer with Pedestal

Electric hot-air sterilizer for sterilization of surgical instruments, glass-wares, dressings, etc. The required sterilizing temperature is automatically controlled. Sterilizing temperature range: 60°-200 °C. Power consumption: 1000 W. KOVO

#### 81/006 CHIRANA M 96 Mobile Operating Stool

For comfortable working and minimizing of the dentist's fatigue during long-lasting operations.

## **81/007 Syringes**

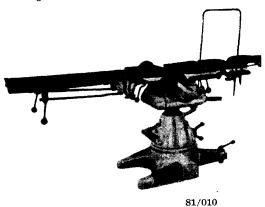
Different sizes suitable for injection treatment. Sterilizable at a temperature of up to 2000 °C. KOVO

#### 81/008 Hypodermic Needles

Made of stainless steel, different sizes.

#### 81/009 Mobile Stand Operating Light

The light beam can be adjusted to any required direction. Uniform, intensive and shadowless illumination of the operating area is ensured. KOVO



#### 81/010 CHIRUS Operating Table

Designed and suitable for all kinds of routine surgical operations including orthopaedic ones. KOVO

#### 81/011 CHIREX UNIT

The mobile case of this unit houses an electromotor with controllable revolutions and a flexible shaft to which rotating or oscillating instruments can be attached which are required to perform different surgical operations. KOVO

# CONTROL OF THE PROPERTY OF THE

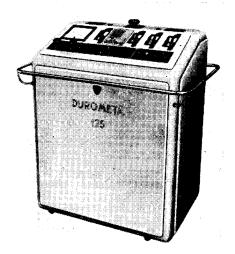
#### 81/015 CHIRAX Portable X-ray Unit

Small portable X-ray unit of high output, intended for radiography of bones, fluoroscopy can be carried out by means of a hand fluoroscope. The X-ray unit is easily portable in two cases. Maximum output: 65 kV, 15 mA. KOVO

81/012

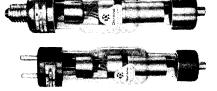
#### 81/012 N-42 Anaesthesia Apparatus

Intended for short as well as long-lasting surgical operations. Ensures long-lasting and deep anaesthesia as well as controllable respirations. KOVO



81/016

81/014

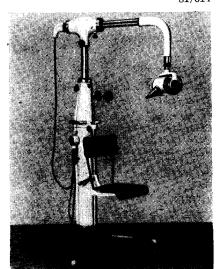


81/013

#### 81/013 X-ray Tubes and Rectifier Valves

From the smallest to the rotating anode types. Set of rectifier valves suitable for X-ray units of different output.

KOVO



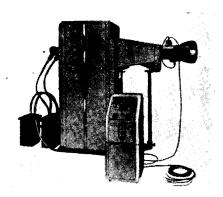
#### 81/014 STOMAX Dental X-ray Unit

Suitable for radiography of teeth, jaws, skulls, bones and different parts of the body. Fitted to a mobile stand. Output of X-ray tube: 65 kV, 15 mA. 40—60 c/s. KOVO

#### 81/016 DUROMETA 125 Four-Valve Diagnostic X-ray Unit

Suitable for radiography as well as fluoroscopy. Maximum output of high-voltage generator is 125 kV during radiography and 100 kV during fluoroscopy.

KOVO



81/017

## 81/017 Photofluorography Equipment

Intended for mass chest survey of large groups of citizens. KOVO

#### 81/018 MOTOSKOP 312 X-ray Examination Tilting Table

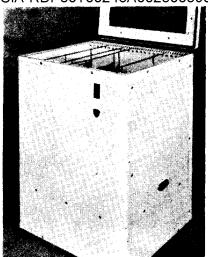
Designed for fluoroscopic and radiographic examination. KOVŌ

#### 81/019 X-ray Film Drying Cabinet

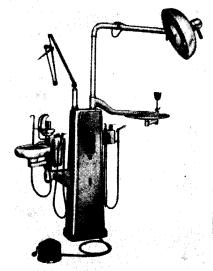
Intended for quick drying of X-ray films. KOVO

#### 81/020 UNIDENT B Dental Equipment

A well equipped outfit for dental surgeries. KOVO



81/019



81/020

#### 81/021 COMPLET E Universal Dental Equipment

Fitted with MINIDENT dental X-ray unit and air compressor. This equipment is provided with all the necessary appliances and instruments required for routine dental work.

KOVO



81/022

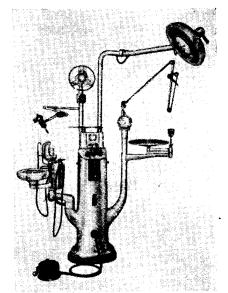
#### 81/022 CHIRANA M 94 Motor Dental Chair

A double-telescope dental chair with electric motor drive. Power consumption: 200 W. KOVO

#### 81/023 CHIRANA M 97 Combined Motor and Oil Pump Anaesthetic Dental Chair

By depressing the raising lever the electromotor of the double-telescope oil pump is switched on and the chair is raised. During power supply failures, the oil pump can be actuated by the foot drive.

KOVO



81/021



81/023

## 82 PLUMBERS' AND BUILDING MATERIALS

Indoor and outdoor piping, enamelled washing troughs, water taps with outlets, sinks, W.C.'s, tanks, basins, feeding apparatus, cast boilers and sheet iron

boilers for wall mounting, enamelled wall-tiles, enamelled or sheet iron baths, children's baths, sinks.

MOTOKOV

### 83 FARMING REQUISITES

Steamers for potatoes, for solid fuels. Electric potato steamers, etc.

MOTOKOV

## 84 REQUISITES FOR THE TEXTILE INDUSTRY

Various bobbins.

PRAGOEXPORT

# 85 BOWDEN CABLES, ARMOUR HOSES, HELMETS

Helmets of plastics for miners and motorcycle riders.

MOTOKOV

**Machines** 

MAFLEX grinders.

MOTOKOV

#### 86 STEEL KITCHENS

LIGNA

## LIST OF NOVELTIES

01/001	Hydrogen Cooled Synchronous		Unit Type SVAREX Exhaustor
	Compensator of DK 6176/2 Series	02/036 02/032	Radial Flow Fans
01/006	Power Transformer 68,000 kVA, 115 ± 5 p. c./15 kV	02/039	Electric Separator for Air Cleaning
01/007	Test Transformer Set, 350 to 1050 kV	02/168	Model of a Radiant Steam
01/008	Three-Phase Short-Circuit- Proof Transformer		Boiler, oil fired, capacity 125 tons per hour, 75 atm., 525° centigrade of superheated
01/012	Voltage Transformer COF 220		steam
01/034	Contact Test Rectifier	04/001	Spiral Heat Exchanger,
01/035	Cable Filled with Oil under Pressure, 110 kV with terminals	04/003	Type K-K Concentric Cylinder Heat
01/038	Three-Phase Squirrel Cage		Exchanger
	Induction Motor RPU 9-36 R/20 Spencer's Diaphragms	04/004	Combined Heater and Exchanger, 100,000 kcal/hr.
	Insultation Tester, Type M 029,	04/011	Drum Type Chamber Filter
01/000	220 V, 50 c/s	04/012	Electrostatic Separator
02/001	Travelling Raking Grate	04/013	Stream Gas Washer
	Block of Flag Boiler Tubes	04/016	Catalytic Purifier
02/003	Differential Mercury Pressure Gauge up to 200 atm.	04/018	Water Treating Unit, capacity 2 litres pen sec.
02/004	Differential Pressure Gauge with Oblique Arm for pressures	05/003	Semi-Automatic Pressure Die- Casting Machine CLP 180.30
	up to 200 atm.	05/010	Revolving Furnace
02/005	Semi-Automatic Sand Filter	06/004	Straight-Sided Crank Press
02/007	Condenser-Steam Cooler		LKT 250/160
02/008	Fully Automatic Oil Burner	06/005	Straight-Sided Crank Press LTL 160/1100
02/009	Turbulence Burner PH 8 for the combustion of gas fuels with a short flame	06/008	Three-Roller Rounding Machine X Z M 200/2, power operated
02/014	Double-Casing Backpressure Steam Turbine	06/010	Friction Screw Press LFK 400/700
02/016	Runner Blades of a Condensing Turbine	06/014	Fully Automatic Thermoplastic Moulding Press
02/017	High-Presssure Feed-Water Heater	06/015	Hydraulic Injection Moulding Press CBA 160-1 for the
02/022	Condensing Steam Turbine VK 50	06/021	treatment of thermosets Hydraulic Forging Press
02/023	Rotor of a steam-Gas Turbine of 4.4 MW capacity		CKV 1000
02/024	Regulating Equipment of Steam Turbines for Medium Outputs		Straightening Press CDK 630 Hand Operated Hydraulic
02/028	Single-Wheel Turbo-Blower, 10,000 cu. metres p. hr., 1.6 atm.		Press LTH Automatic Coil Spring Machine
02/029	Unit Exhaustor, type JOVUN	30.020	Au 8
	Industrial Manager Classes	07/005	Control Father GG 50 TS

261

07/005 Centre Lathe SS 50 K

02/030 Industrial Vacuum Cleaner

- 07/006 Universal Centre Lathes SN 55 to SN 71
- 07/007 Centre Lathe SU 63 A
- 07/017 Single Spindle Automatic Lathe AD 25
- 07/018 Camless Automatic Lathe AB 80
- 07/019 Vertical Miller FVS 16
- 07/020 Knee Type Milling Machine FB 50 V
- 07/021 Knee Type Milling Machine FA5U
- 07/022 Milling Machine FRE 03
- 07/023 Vertical Milling Machine FV 1000
- 07/030 Horizontal Drilling Machine H 63 A
- 07/031 Universal Grinder BUA 31
- 07/033 Horizontal Surface Grinder BRH 25
- 07/038 Crankshaft Grinder BKU 63
- 07/047 Automatic Lathe ANK 90 for squaring the ends and machining the holes of conveyor bearing tubes
- 07/048 Unit Head Machine 77073 for the machining of front wheel
- 07/049 Unit Head Machine 77077
- 07/050 Fine Boring Machine B 2
- 07/051 Automatic Production Line LX 1
- 08/001 Magnetic Thickness-Gauge
- 08/002 Automatic Viscosity Regulator and Recorder for Paints and Similar Liquids
- 08/004 Automatic Dipping Plant for Electrical Resistors, Type LAO 153
- 08/005 Sherardizing Process Using Zinc Ashes
- 08/006 Electrometallizing Semi-Automatic Gun, EMP/2/57
- 98/008 Airless Spraying Equipment for Electrostatic Fields
- 08/009 Chromium Diffusion Plant for the Treatment of Steel Components Designed to Substitute Brass

- 08/010 Bright Galvanizing Plant with Automatic Control of Current Density
- 08/011 Cement Hand Grinder
- 08/013 Universal Belt Polishing Machine, Type ULS
- 08/021 Air-Cooled Polishing Wheels
- 08/022 Liquid Abrasive Honing Plant
- 08/029 Pressure Vessels
- 10/002 Electric Arc Welding Set K-200
- 10/005 Petrol Driven Electric Welding Set BS-320
- 10/006 Argon Welding Machine ARC T 012
- 10/007 Argon Welding Machine ARC T 032
- 10/008 TRIODYN K-320 Electric Arc Welding Set
- 10/009 Ionisator T 001
- 10/011 Electronic Miniature Spot Welder Control
- 10/014 Electronic Seam Welder Control EROS-S 200
- 10/019 Automobile Body High-speed Spot Welder BK 60
- 10/023 Automatic Butt Welder TAU-80
- 10/024 Portable Gyroscopic Spot Welding Gun KPH 120
- 10/026 Portable Oxygen Cutting Machine RSO micron
- $\begin{array}{ccc} \textbf{10/027} & \textbf{Miniature Uniform Pressure} \\ & \textbf{Oxygen-Acetylene Welding Set} \\ & \textbf{L 54} \end{array}$
- 10/029 Dissous Gas PSA and Propane PSPB Soldering Sets
- 10/030 Closing Valves
- 10/030 Cutting Extension for Circular Holes RNK
- 10/030 Cutting Extension for Rivet Heads RNN
- 10/031 Welding Machine SUM 1000
- 10/032 Output Regulator RV-01
- 10/033 Automatic Welding Machine for Boiler Chamber Sockets SNK-500
- 10/034 Semi-Automatic Aluminium and Stainless Steel Welding Machine SAP 400

- 10/035 Oxygen Cutting Machine RNS 1000
- 10/036 Miniature Spot Welder MB 2
- 10/038 Model of High-Speed Spot Welder BK 60
- 10/040 Welding Adapter T-60
- 11/001 Two-Stroke Air-Cooled SLAVIA Oil Engine 1 D 80
- 11/002 Single-Cylinder Two-Stroke Water-Cooled SLAVIA Oil Engine 1 D110
- 11/003 Single-Cylinder Four-Stroke Air-Cooled SLAVIA Oil Engine 1 ST120
- 11/009 SLAVIA Diesel-Electric Generating Set with an output of 7.2 kVA
- 11/012 ŠKODA Marine Oil Engine, Type 1 L 110
- $\begin{array}{cccc} \textbf{11/016} & \textbf{Marine Diesel Generating Set} \\ & \textbf{with 6L110 ŠKODA Engine} \end{array}$
- 11/018 ŠKODA Oil Engine 4 R 140
- 11/019 Emergency Automatic 150 kVA Diesel-Electric Power Station with ŠKODA 6 S 160 Engine
- 11/020 Mobile 125 kVA Diesel-Electric Power Station with ŠKODA 6 R 140 Engine
- 11/021 ŠKODA Oil Engine 6 L 160
- 11/022 ŠKODA 450 kVA Diesel Generating Set
- 11/023 Direct Reversing ŠKODA 6 L 275 P Marine Oil Engine
- 11/032 ČKD Hydraulic Transmission Type H 350 L
- 11/033 Vertical Single-Stage Two-Stroke Double-Cylinder Air Compressor 2 SK 200 B
- 11/041 Air-Cooled Rotary Compressor ATMOS VR-200
- 11/045 Mobile Compressor ATMOS DK 4 R
- 12/001 Ultrasonic Impulse Equipment
- 12/002 Gammography used for the production of fittings and for checking welds
- 12/003 Contactless measuring of sheet thickness vy means of radio active isotopes
- 12/004 Recording equipment for automatic ultrasonic testing of bearing pans

- 12/007 Surface Flame Hardening
- 12/008 Optical and Magnetic Dilatometers
- 12/011 Vibratory Equipment for Fatigue Tests of Turbine Blades
- 12/012 Vibratory Equipment for Measuring the Resonant Frequency of Turbine Blades
- 12/013 PEVA 4 Balacing Machine
- 12/015 Axial Test Compressor, 14 to 22,000 r. p. m.
- 12/016 Blade Measuring Diffusor with Semi-Automatic Counter
- 12/018 Precision Transducers for High and Higher Temperatures
- 12/020 A model combustion Chamber for the second stage of blastfurnace gas combustion
- 13/006 Dynamoelectric Milli-Second Firing Machine DMDERS/54
- 13/014 Three Product Coal Separator with Heavy Medium Closed Circuit
- 14/011
- -013 Resistance Thermometres and Pyrometers
- 14/016 Salinometer
- 14/027 Magnetic Controller
- 14/028 Self-Operated Temperature Controller
- 14/029 Manostat
- 14/036 Air-Operated Control Instruments
- 14/044 Air-Operated Pressure Transmitter
- 14/045 Air-Operated Temperature Transmitter
- 14/046 Air-Operated Level Transmitter
- 14/047 Air-Operated Flow Transmitter
- 14/048 Air-Operated pH Value Transmitter
- 14/049 Central Pneumatic Relay
- 14/050 Hand Relay No. 07031
- 14/051 Control Panel No. 07041
- 14/052 Booster Relay No. 07021
- 14/053 Diaphragm-Operated Control Valves
- 14/059
- -062 Electric Power Units with Rotating Output Shaft

- 14/072 Maxigraph Křižík M6S
- 14/073 Despatching Cabinet Křižík DS6
- 14/074 Accurate Three-Phase Three-Wire System Watt-Hour Meter P3
- 14/089 Automatic Parallelling Instrument RFS
- 14/096 Measuring Oscilloscope T 565
- 14/099 Double-Beam Osciloscope D 564
- 14/101
  - -104 Polaroscope P 576
- 14/103 Preamplifier Z 562
- 14/111 Quick-Acting Distance Protective Relay for earthed nets of very high voltages D110
- 14/112 Universal Moving Coil System Relay UCR
- 14/117 Time Relay TD1
- 14/127 Remote Measurements
- 14/128 Magnetic Amplifier
- 14/129 ROME Magnetic Speed Regulator of d. c. Machines
- 14/131 Pilot-less Remote Control (of cranes)
- 14/132 Non-contacting Thickness Meter
- 14/133 Loss-angle Meter
- 14/134 Ferrograph
- 14/135 Ferrometer FM 02
- 14/136 Quantity and Quality Analyzer
- 14/137 Transient Phenomena Recorder
- 14/138 D. C. Tachodynamos T1, TK2
- 14/139 Two-phase Induction Servomotors SMA 1, SMA 2.5, SMA 5
- 14/146 Control Oscillograph
- 15/008 One Action Pulling Over Machine by Cementing
- 15/012 Universal Heel Attaching Machine
- 15/020 Single-Cylinder Automatic Knitting Machine JDa-34
- 16/029 Maxima-Fron
- 17/006 Concrete Mixer, 100 cu. metres per hour
- 17/007 Concrete Mixer C 501
- 17/008 Hollow Block Machine T 2
- 17/009 Mortar Pump and Plastering Machine OB 4

- 17/011 Vibrating Screen VSM 1
- 17/017 Mortar Mixer MM 250
- 17/028 Snow Plough SF
- 17/031 Tank VLH, 10 T
- 17/032 Truck for Loose Pulverised Materials with Overpressure Discharging Equipment
- 17/037 Concrete Finisher FB 3.75
- 17/039 Cement Spreader
- 17/040 Automatic Sweeper ZSI-T 805
- 17/041 Highway Strip Widening Roller
- 17/043 Concrete Pump CB 12
- 17/044 Hot-Air Generating Set
- 17/045 Concrete Mixer KM 10
- 17/046 Continuous Weighing Equipment
- 17/047 Tank for Cement Spreader
- 17/048 Hydraulic Vibration Press for the production of hollow blocks
- 17/049 Vertical Stationary Cutter of Refractory Materials SVF 1
- 17/050 Model of a Line for the Production of Longitudinal Parts
- 17/051 Single-Axle Tractor T 180
- 17/052 Off-Road Trailer TV 10
- 18/002 Bucket Elevator
- 18/003 Mechanical Shovel with Double Hopper, Type MLP 2
- 18/004 Loader, Type Brom
- 18/005 Resonance Conveyor
- 18/008 Battery Tractor, Type AT 1521
- 18/021 Flowroll Gravity Conveyor
- 18/028 Low Lift Truck, Type NZV 1200
- 18/030 Hoisting Platform, Type MSP 350
- 18/031 Hoisting Platform, Type MP 1500
- 18/034 Palette I
- 18/035 Overhead Travelling Grane 50/8 T
- 18/036 Typified Crabs
- 18/048 Sectional Wheel Conveyor KD 2000
- 19/005 Four-Roller Mill, Type MH
- 19/007 Automatic Meat Mincing Machine, Model 112

- 19/008 Electric Bowl Meat Cutter, Model 127
- 19/009 Vacuum Sausage Filling Machine, Model 157
- 19/010 Automatic Mixing Machine, Model 143
- 19/011 Disintegrator 131
- 19/018 Plate Type Milk and Cream Pasteurizer, Model PD 1000
- 19/020 Butter Churn, Model 4 MV 400
- 19/021 Stainless Butter Churn
- 19/022 Ripening Tank
- 19/024 Carbonator Filling Machine
- 19/035 Crushed Ice Plant
- 19/036 Automatic Regulating Apparatus
- 19/037 Freon Condensing Units
- 19/038 Refrigerator Show Case for Self-Service
- 19/038 Double Refrigerator Show Case for Self Service
- 19/040 Automatic Electric Refrigerator SA 900
- 19/041 Display Counter CS 630
- 19/044 Universal Mixing and Kneading Machine, Type S 2
- 19/049 Thermo-Case TB 20
- 19/050 Mobile Crushed Ice Plant .
- 19/051 Hypothermic Apparatus
- 19/052 Evaporative Condenser Unit F 12
- 19/053 Oil Pressure Control Device
- 19/055 Pressure Regulating Valve
- 19/056 Suction Line Valve
- 19/057 Automatic Hydraulic Valve
- 19/058 Overpressure Control Valve, Type PJA
- 19/062 Relief Valve JV 1 and JVA 1
- 19/063 Fitche's Measuring Apparatus
- 19/073 Continuous Pastry Forming Machine
- 19/082 Vibratory Separator for Precleaning
- 19/083 Cross Beating Mill SU 4
- 19/086 Seven-Cylinder Gutcasing Cleaning Machine MV - 195
- 19/087 Band-Type Machine for the Removal of Cherry Stems

- 19/089 Baking Plate Scraper 475
- 19/090 Vegetable Slicer
- 19/092 Automatic Weighing, Measuring and Registering Machine for loose materials A-1
- 19/093 VULKAN Mixer, Type 430
- 19/094 Flour Sifting Machine KPM-I/3000
- 19/095 Small Sifting Machine MPZ-I-300/2500
- 20/001 Diesel-Hydraulic Locomotive, Output 400 H. P. 1435 CN 400
- 20/002 Diesel-Electric Locomotive Co'-Co', Output 1650 H. P. -T 698.0
- 20/003 Electric Locomotive 21E for Open Pits
- 20/004 Diesel-Electric Locomotive, Bo-Bo Type, Output 750 H. P. -T 435.0
- 20/006 Eight-Wheel Express Coach without Compartments,
  Type Bai
- 20/015 Diamond Bogie for trucks
- 20/016 Model of an Eight-Wheel Motor Car of M 230.4 Series
- 20/017 Model of a Suburban Electric Four Car Unit
- 21/001 Shaft Guide
- 22/053 High-Pressure Rainer ZV-2000
- 22/081 Mobile Pumping and Measuring Group
- 22/082 Rotary Flow-Meter L 4000
- 22/083 Motormeter
- 22/085 Oil Piston Hand Pump
- 24/004 Sports Aircraft LD 40 Meta Sokol
- 24/007 Sports Aircraft L 200
- 24/011 LUN 1207 Horizont
- 24/013 Speedometer up to 400/800 km/hr. LUN 1103
- 24/024 Small Engine with Glowing Plug Vitavan 2.5 and 5 c. c.
- 26/001 Double-cell Photocolorimeter
- 26/002 Photocolorimeter Minor
- 26/005 Multobat II
- 26/006 Multobat III
- 26/009 Penning Vacuum Meter

34/019 Air-Rifle with Magazine for 26/010 Flowmeter with induction transmission 30 shots 26/011 Engler Viscosimeter 34/019 Small Bore Pistol 22 Short 26/014 Electromagnetic Titration 34/025 Automatic Small Bore Rifle Mixer ZKM 561 26/015 Oil Oxidising Number 34/026 Small Bore Rifle ZKM 457 for target shooting 26/016 Portable Smoke Meter 34/031 Over and Under Shotgun, 26/017 Thermostat cal. .12 26/018 Diffusion Oil Vacuum Pump 34/038 Universal Slaughtering 29/005 Thyratron 25 kV/1000 A Device JAT 54/I 29/006 Tacitron 80 mA and 500 mA 36/012 Shift Control Clock DK-3 29/007 Rectifying Discharge Tube 38/007 Škoda 450 Roadster with a cold cathode 2 kV/4 Convertible 38/008 Tatra 603 29/008 Rectifying Discharge Tube 38/009 Škoda 445 with a cold cathode 1kV/100uA-13 TA 9 39/003 Motor Cycle Jawa-ČZ 250 c. c. 29/009 Screen 181 OP 44/M 39/004 Motor Cycle Jawa-ČZ 350 c. c. 29/010 Quanticon 41 QV 40 39/013 Jawa 350 Race Motor Cycle 29/012 Superorthycon 61 QM 40 39/015 Jawa-ČZ 250 c. c. Motor Cycle 29/013 Oil Diffusion Suction-Pump 39/016 Jawa-ČZ 350 c. c. Motor Cycle 29/014 Vacuum Unit 300 litres 39/022 PIONÝR-JAWA 50 per sec. 40/001 Škoda 706 RTO Bus 29/015 Oil Diffusion Suction-Pump 40/002 Škoda 706 RTO Motor Coach 500 litres per sec. de Luxe 33/038 Magnifax II  $6\times9$ 40/003 Škoda 706 RTO Bus, Municipal 33/061 Macro-Equipment Model 33/064 Rewinders for rewinding 40/004 Škoda 706 RTO Motor Coach of 8-mm and 16-mm film 41/004 N 1 OCH Refrigerator Trailer 33/068 Reproducing equipment for for T 137 Tug Opemus II 41/006 Tatra 141 33/069 Set-up Shutter 41/007 Tatra 137 33/070 Short-type Tripod Reducing 41/008 Tatra 137 S 1 Sleeve 41/009 Tatra 138 A 33/072 Slide Projector 11×14 mm 41/010 Tatra 137 NT 33/073 Push-button Release 41/013 Praga V3S Tipper 33/074 Base-board with Drawer 41/014 Praga S5T 33/075 Reproducing equipment for Magnifax II 41/015 Praga S5T Tipper 33/076 Masking equipment for 41/016 Praga S5T Platform Truck Exposure Tests 41/018 Škoda 706 RTTS Tug 33/077 Macro-Adapter for Magnifax II 42/001 Š 706 ROK-KUKA Dust Bin 33/077 Macro-Adapter for Opemus II Collector 33/078 Opemus Illuminator 42/002 Š 706 AKVMRT Municipal

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33/080 Reproducing Equipment for

Microma

33/081 Anamorphot

Sprayer

43/003 Trailer-Tanker

42/003 V3S Petrol Tanker

- 43/005 A 10 Trailer
- 50/006 3 PN-30 Tractor-Mounted Three Bottom Plough
- 50/007 3 PN-30 Mounted Three-Tractor Bottom Plough
- 50/008 4 PN 30 Tractor Mounted Four Bottom Plough
- 50/011 2 PNO-35 Mounted Two Bottom Reversible Plough
- 50/032 KPZ 260 Trailing Cultivator
- 50/048 Rotary Cutter ŘRM
- 50/050 Flax Picker with Sheller and Binding Attachment SLOZ
- 50/051 Flax Picker, Type SLUZ
- 50/055 Food Mixer, Type MJK-300
- 50/056 Potato Grader TB 10

- 50/061 Tractor Binder ŽVZ 210
- 50/091 Hay Blower with Feeding and Crushing Attachment, Type VSDP
- 50/092 Two Wheel Trailer DP 2.5 S
- 50/094 Farm Wagon PV 2.5
- 50/095 Manure Loader NH-100-A
- 50/097 Manure Spreader, mounted
- 50/125 Grain Dusting Box OSO-57
- 81/001 Dental Oil Sterilizer STE 36
- 81/002 Electric Hot-Air Sterilizer Chirosteril STE 43
- 81/020 Unident B Dental Equipment
- 81/021 Complet E Universal Dental Equipment

#### CATALOGUE SUPPLEMENT

- 01/010 1200 kVA Transformer 01/017 Switchgear Instruments for very high voltages 01/026 6 kV Switchgear
- 01/030 Dry Rectifiers
- 01/033 Rotary Rectifier 0.2 A, 75 kV
- 01/036 D. C. Motor for Rolling Stand, 600 kW, 500 V
- 01/045 Series of Electromagnetic Contactors
- 01/046 Contactor Box SR 1600
- 01/065 Induction Regulator
- 01/066 Compensating Transformer
- 01/067 Switchboard and Control Desk
- 01/096 Weatherproof Fuse, 35 kV, 400 MVA, up to 25 A
- 01/104 Measuring air-pressure track with accessories
- 01/128 Explosion-proof Instruments and Equipment
- 01/133 Auxiliary Relay R 4 122, R 10 - 123
- 01/134 Selenium Rectifiers for Battery Charging
- 01/135 Selenium Rectifiers used in galvanic technique
- 01/136 Selenium Welder, 200 A
- 01/139 Hydraulic Tongs
- 01/140 Three-phase Transmission Motors
- 01/141 One Phase of VV 220/d -220 kV air-pressure switch
- 01/143 Flexible Shaft Grinders
- 01/144 Technical Porcelain
- \*02/180 Steam Turbine Drying Set
- 03/159 DRUKOV Condensate Lifter, Type ZPS, Size 2
- 04/014 Absorption Column
- \*04/015 Extractor, 10 cu. metres
- 04/027 Hydroextractor, 1500 in dia.
- 04/029 Transformer Oil Filtering Plant, capacity 2000 litres p. h.
- 05/018 Automatic Machine for the Production of Shell Moulds
- 05/019 Semi-Automatic Machine for the Production of Shell Moulds

- 05/020 Shell Core Blasting Machine
- 05/021 Shell Gluing Press
- 05/022 Shell Mixer
- 05/023 Foundry Laboratory
- 05/025 CT Preparations
- 05/026 CT Reduction
- 05/027 CT Spraying-on Gun
- 05/028 Grate
- 05/029 Small Dressing Plant (drawings)
- 05/030 CT Regeneration
- 05/031 Wet Regeneration
- 05/032 Water Jet Machine of Medium Size
- 06/027 Eccenter Press LEN 105
- 06/031 Tilting Drawing Press with hold-down cam, type LNT 25
- 06/032 Eccenter Press LE 50 S
- \*07/016 Tool Grinder BPH 20
- \*07/043 Screw Cutting Lathe ZRV 64
- 07/062 Hardening Machine VAN with generator GV 201
- 07/067 Electroabrasive Grinder **DJF 18**
- 07/069 Watchmaker's Lathe
- 07/070 H. F. PVC Welding Machine, type EDS 4
- 07/072 Milier FA 4 H
- 07/073 Miller SH 2 A
- 07/074 Vertical Heads VH 2 C
- 07/076 Two-Spindle Drilling Machine  $V \ 32/2$
- 07/077 Special Machine for the Machining of Bevel Pinion Holes in the Chuck Body
- 07/078 Special Spindle Grinding Machine BE 7/3
- 07/079 IHA Hydraulic Control
- 07/080 High-pressure Gear Pumps JHZJ
- 07/081 Anode-Mechanical Spark Erosion Saw PA 6
- 07/082 Small Ultrasonic Cleaner PU 02
- \*08/034 KOMPAREX Sample Card

08/035 Corrosion of samples, panels and instruments 08/036 Electrostatic Field 08/037 Complete Milling Equipment 08/038 Polyamide and Polyethylene Fluidizing Equipment 08/039 Cloth Polishing Wheels 10/051 Electrodes 10/052 Seam Welder SP 60 10/053 Adjustable Working Table PS 2000 10/054 Cutting Attachment 10/055 Miniature Spot Welder 10/056 Seam Welder for transformer plates 11/059 SP 300 Remote Control Drive Plant with engine 25110 and starter motor 11/060 Automatic Diesel Generating 11/061 Stationary Steam Engine 4SP260A 11/062 Four-Cylinder Four-Stroke Air-Cooled Oil Engine T 924 11/063 Six-Cylinder Four-Stroke Air-Cooled Oil Engine T 926 11/064 Eight-Cylinder Four-Stroke Oil Engine T 928 11/065 Eight-Cylinder Four-Stroke Oil Engine T 928 K with Turbo-charging 11/066 Twelve-Cylinder Four-Stroke Oil Engine T 932 11/067 Eight-Cylinder Four-Stroke Water-Cooled Railway Oil Engine K8S-310 DK with Turbocharging 12/029 Wire Durability Tester 12/030 Debye Scherer Cells for Micro-X-Ray Unit 12/031 Binar Impulse Reductor 12/032 Wire Tester 12/033 Equipment for Measuring the

Temperature at Flow Tests

Boiler for Central Heating

13/034 Universal Cast-Iron Tubular

VSB-IV

13/035 Hydraulic Prop Tightener 13/036 Sand Blasting Guns 13/037 Chisels 13/038 Prop Tightener \*14/149 Test Table T 2 PR 600 V 14/150 Model of power dispatcher's rooms 14/151 Various Suspension Instruments \*14/152 Distributor with Rotary Gauge 700 VA 15/039 Hood Dyeing Machine 16/040 Romajor-Zetaprinton 16/041 Automatic Loom ES 16/042 Zetakont B Woodworking Machines: 16/101 Light Hydraulic Veneer Press 16/104 Fibre Homogenizing Machine for the production of woodfibre boards 16/105 Thicknessing Lathe HPC 16/106 Thicknesser HSB 16/107 Lathe FTB 16/108 Automatic Pattern Makers Shaping Machine FMA with a set of special tools 16/109 KSS Cross-Cut Saw 16/110 Automatic NPP Saw Grinding Machine 16/111 Automatic NEP Saw Grinding Machine 16/112 FHM Lathe with frequency changer for 17,000 spindle rev. 16/113 Thicknessing Planer T 40 16/114 Surface Planer T 30 17/071 Steel Sand Tank 17/072 Crushers and Sorters 17/073 Excavator DO 51 18/049 Typified Bridge Crane 20/5 T, 16.4 m. 18/050 Electric Hoists L III 15

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18/051 Trolley

18/052 Portable Conveyor, within

a radius of 6 metres

18/054 Crab D 515/3 T	20/020 Model of city traffic with
<b>18/055</b> Crab 16.31/1 T	a trolley-bus car and transformer
18/056 Ratchet Type Jack 3.2 T	20/022 Diesel Locomotive BN 150
18/057 Ratchet Type Jack 5 T	33/030 Table Gas Analyzer TZS
18/058 Jack Z 20/2.5 T	33/031 Portable Gas Analyzer TZp
18/059 Jack Z 21/7.5 T	33/032 OKA Document Printer
18/060 Hydraulic Jack CHZS 50	33/033 MAGNOLA Tripods
18/061 Hydraulic Jack CHZS 100	46/014 Air Filters for Petrol Engines
18/062 Hydraulic Jack CHZS 200	46/015 Air Filters for Oil Engines
18/064 Electric Pulley Block R 1/250	46/016 Dynamos for passenger cars and trucks
18/065 Trailer T 258	46/017 Ignition switchboxes
18/066 Trailer T 278	46/018 Fuel Test Engine OKC
19/096 Sour Cream Processing Plant	47/003 Racing and Special Bicycles,
19/097 Automatic Grain Balance, 20 kg	Type F 24
19/098 Air-Pressure Filter $40\times40$ D 10	47/004 Children's Bicycles, Type Sp 110, P 103, P 104, PE 5,
19/099 Distilling Apparatus DAE 10	PE 6
19/100 Ham Boiler	*50/102 Single-Bottom Mounted Plough P NO 35
19/101 Liquid Egg Pasteurizer	50/103 Mounted Cultivator with fixed
19/106 Model of a Meat Processing	tines for use with Z 25 tractors
Plant	50/104 Post Hole Digger VTN 55
19/107 Model of an Ice Rink and	50/105 Light Harrows SE 4
Freezing Plant	50/106 Hammer Mill SK 36 50/107 Automatic Pest Destroying
19/108 Model of an ice-factory	Machine
19/109 Model of a Bakery	50/108 Stacking Elevator S 1300
<b>19/110</b> 4 ÚD 260 Air Compressor	50/109 VERTEX Horse Drawn Side Delivery Rake and Tedder
19/111 2 SN 200 Air Compressor	50/110 Hand Machines for the
19/112 2 SN 300 Air Compressor	preparation of fodder
19/114 High Lift Truck	50/113 ESOX Amphibious Water Weed Launch
19/117 Fountain (set)	50/114 Clover Seed Sheller
19/118 Cristal (set)	50/115 RYMIPOL Food Mixer
19/120 Model of an Absorption Refrigerator	50/118 MTZ 8 Liquid Manure Spreader
19/121 Roller Track	50/120 TRI Grain Cleaning Plant
19/122 Low Lift Truck	50/121 Potato Grader TBP 30
19/123 Automatic Dosing Set for	50/122 Maize Husker
Sweets	*50/126 Scythe Grinder with universal head
19/124 Suppository Making Machine	50/127 DRUKOV Farm Wagon
19/125 Tablet Making Machine	· ·
19/126 Automatic money changer	50/128 Farm Wagon
19/127 Bottlee Shopping Machine	50/129 Sludge Pump

\*50/130 Grain Blower

50/131 TORON SPECIAL Hay Blower

50/136 Horse Drawn Hoe

50/137 Hand Hoe

50/138 Mobile Sprayer

50/139 Six-Row Beet Hoe, Type BRANDÝS

50/140 Hop Garden Plough

50/141 Vineyard Plough ZP 130

50/142 Set of Bottoms and Plough Shares

50/143 DEZA, DRUPOL, SLOKOV, HLUBINA Hand Sprayers

50/145 S 350 Clod Crusher

50/146 JARO Harrows

50/148 Grape Presses

\*50/149 Sugar Beet Hoe PN 12

\*50/150 Flax Tedder OLZ

\*50/151 Beet Seed Drill 6 SVKŘ 450

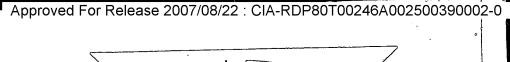
50/152 Horse Drawn Tedder

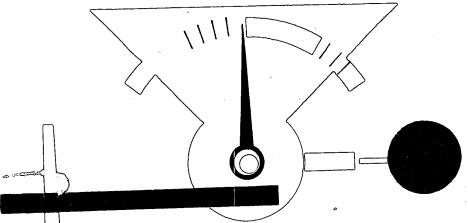
80/001 Clothes Cleaning Machine CH30

84/001 Polytex, a plastic used in the engineering industry .

84/002 Industrial Chains

The novelties are marked with an asterisk \*.





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